

## VHF PANEL-MOUNT TRANSCEIVERS

Manufacturer	Model	Channels	Power Output (peak W)	Units/Weight (lb.)	Price	Remarks
	TSO	Channel Display	Power Required	Size (in.)		
<b>Honeywell Aerospace</b> Bendix/King Avionics 9201 San Mateo Blvd. Albuquerque, NM 87113 <a href="http://www.bendixking.com">www.bendixking.com</a>	Bendix/King KY 97A	760	7 nominal	1/2.9	\$3,476	Active/standby frequency stored channels. LCD 14 V.
	C37c C38c	LCD; nvm	14 VDC	6.25 x 1.3 x 10.5		
	Bendix/King KY 196A	760	16 nominal	1/3.2	\$5,312	Active/standby frequency; stored channels; LED, 28 V.
	C37c C38c	LED	28 VDC	6.3 x 1.35 x 10.8		
	Bendix/King KY 197A	760	10 nominal	1/3.2	\$5,374	LED, NVM
	C37c C38c	LED; nvm	14 VDC	6.3 x 1.35 x 10.8		
	Bendix/King KY 96A	760	7 nominal	1/2.9	\$3,164	Active/standby frequency, stored channels, LED, 28 VDC.
	C37c, C38c	LCD, non-volatile	28 VDC	6.25 x 1.3 x 10.5		
	Bendix/King KY 196B	2280	18 nominal	1/3.2	\$7,246	Active/standby frequency; stored channels; LED 28 VDC.
	C37c C38c	LED; nvm	28 VDC	6.3 x 1.35 x 10.8		

## VHF REMOTE-MOUNT TRANSCEIVERS

Manufacturer	Model	Frequency Display	Xmit Power (W)	Units/Weight (lb.)	Price	Remarks
	TSO	Frequency Storage		Size or Form Factor		
<b>Honeywell Aerospace</b> Bendix/King Avionics 9201 San Mateo Blvd. Albuquerque, NM 87113 <a href="http://www.bendixking.com">www.bendixking.com</a>	Bendix/King KTR 908	gas discharge	20/NA	2/4.3	\$21,483	Includes KFS 598A control with digital display of active/standby frequencies, flip-flop 118.0-151.975 MHz.
	C37c C38c	2 (9 channels); 118.0-151.975 MHz opt.		1.8 x 5.0 x 11.8	28 VDC	
<b>Rockwell Collins</b> 400 Collins Rd. N.E. Cedar Rapids, IA 52498 (319) 295-4085 Fax: (319) 295-2297 <a href="http://www.rockwellcollins.com">www.rockwellcollins.com</a>	VHF-22A	CTL-22G gas discharge 2x5 serial digital tuning	20	2/5.8	\$18,944	Built-in diagnostics; VHF-22B, 118.0-151.975 MHz. Operates in 25 kHz tuning movements; includes CTL-22.
	C37c C38c	8 frequencies; nvm		3/8 ATR-SL	28 VDC	
	VHF-422A	CTL-22G gas discharge	20	2/5.8	\$18,936*	Built-in diagnostics. *BCA estimate.
	C37c C38c	8 frequencies; nvm		3/8 ATR-SL	28 VDC	
	VHF-22C	CTL-22D gas discharge; 2 x 5 serial tuning	20	2/5.8	\$21,864*	Built-in diagnostics; VHF-22D 118.0-151.975 MHz, \$24,036. VHF-22D, 8.33 kHz/25 kHz tuning; includes CTL-22C. *BCA estimate.
	C37c, C38c	8 frequencies; nvm		3/8 ATR-SL	28 VDC	
	VHF-422C	CTL-22D gas discharge	20	2/5.8	\$23,696*	Built-in diagnostics; compatible only with CSDB or ARINC 429 controls; VHF-422D, 118.0-151.975 MHz, \$21,756. 8.33/25 kHz tuning; includes CTL-22C. *BCA estimate.
	C37c C38c	8 frequencies; nvm		3/8 ATR-SL	28 VDC	

## VHF REMOTE-MOUNT TRANSCEIVERS

Manufacturer	Model	Frequency Display	Xmit Power (W)	Units/Weight (lb.)	Price	Remarks
	TSO	Frequency Storage		Size or Form Factor	Power Required	
<b>Rockwell Collins</b> 400 Collins Rd. N.E. Cedar Rapids, IA 52498 (319) 295-4085 Fax: (319) 295-2297 <a href="http://www.rockwellcollins.com">www.rockwellcollins.com</a>	<b>VHF-4000</b>	CTL-22 gas discharge	20	2/4.7	see remarks	Built-in diagnostics; compatible only with CSDB or ARINC 429 controls. Options: 001 baseline: includes CTL-22.
		C37d C38d		2.5 MCU	28 VDC	101 adds 8.33; includes CTL-22C. 201 adds Mode A/2 data; includes CTL-22.
	<b>VHF-4000E</b>	CTL-22C gas discharge	20	2/4.7	\$21,892-\$26,264*	Built-in diagnostics; compatible only with CSDB or ARINC 429 controls. Options: 101 adds 118.0-151.975 + 8.33; includes CTL-22C. 301 adds Mode A/2 data; includes CTL-22C. *BCA estimate.
		C37d C38d		2.5 MCU	28 VDC	301 adds 8.33 and Mode A/2 data; includes CTL-22C. Prices range from \$13,976 to \$21,892.* *BCA estimate.
	<b>VHF-422D Transceiver</b>	gas discharge	20	2/5.8	\$30,168*	*BCA estimate.
		C37c C38c		3/8 ATR-SL	28 VDC	
	<b>VHF-4000 Transceiver</b>	gas discharge	20	24.7	\$68,620	*BCA estimate.
		8.33/25 kHz		2/5 MCU		
	<b>CVC-152</b>	color LCD	N/A	1/0.75	\$4,347*	Gray or black panel. *BCA estimate.
		control display		2.50 x 3.15 x 4.29	5 VDC, 5 VAC or 28 VDC	
<b>Cobham Electronics (formerly Wulfsberg)</b> 6400 Wilkinson Dr. Prescott, AZ 86301 (928) 708-1550 (928) 541-7627 <a href="http://www.wulfsberg.com">www.wulfsberg.com</a>	<b>CCN-955</b>	see remarks	N/A	1/0.75	\$7,643*	Optional multi-function display; color LCD displays nav and comm data. *BCA estimate.
				2.50 x 3.15 x 4.29	5 VDC, 5 VAC, 28 VDC	
	<b>CVC-151 FliteLine</b>	118-136 MHz 118-11.975 MHz	20	1/3.3	\$14,461*	ARINC 429 bus interface; 8.33 or 25 kHz spacing; FM immunity; auto-tune capability. FMS and radio management interface capability VDL Mode 2 & 3 provisions; color LCD shows nav and comm data. *BCA estimate.
		C169		4.10 x 2.40 x 13.33	18 - 33 VDC	

## HF TRANSCEIVERS

Manufacturer	Model	Frequency Range	Xmit Power (W)	Units/Weight (lb.)	Price	Remarks
	TSO	Channels		Size or Form Factor	Power Required	
<b>Honeywell Aerospace</b> 1944 East Sky Harbor Circle Phoenix, AZ 85034 (800) 601-3099 Fax: (602) 365-3343 <a href="http://www.honeywell.com">www.honeywell.com</a>	<b>HF-1050</b>	2-29.999	200 PEP (SSB)	4/29.9	\$83,302	Delivers 200 W PEP transmitter power and four squelch options. "Once tuned, always tuned" coupler capability provides <20 millisecond response. PS-440 controller provides 99 user-programmable channels, clarifier functional and coupler tune status.
		C31d C32d		KRX 1053 Receiver/Exciter: 5.56 lb; 10.8 x 3.1 x 5.0  KPA 1052 Power Amplifier: 6.67 lb; 12.7 x 7.2 x 1.8  KAC antenna coupler: 9.87 lb; 13.0 x 4.7 x 9.87	28 VDC	
<b>Rockwell Collins</b> 400 Collins Rd. N.E. Cedar Rapids, IA 52498 (319) 295-4085 Fax: (319) 295-2297 <a href="http://www.rockwellcollins.com">www.rockwellcollins.com</a>	<b>HF 9000 System</b>	2 - 29.9999 SSB/AM AM data	selectable power output 10.50, 175 PEP	3/27.5	\$99,980*	Fiberoptic interface; rapid-tune antenna coupler (40 millisecond computer training); BITE. Includes HF receiver/transmitter antenna coupler and radio-tuning unit. *Special order price and delivery
		280,000; 99 operator programmable; 176 ITU r/t programmed		controller: 2.625 x 5.75 x 5.85  transceiver: 7.625 x 5.55 x 12.60  antenna coupler: 7.6 x 3.8 x 13.0	28 VDC	

## HORIZONTAL SITUATION INDICATORS/COMPASS SYSTEMS

Manufacturer	Model	Gyro	Autopilot Outputs	Units/Weight (lb.)	Price	Remarks
	TSO	Slave Rate		Form Factor	Power Required	
<b>Honeywell Aerospace</b> Bendix/King Avionics 9201 San Mateo Blvd. Albuquerque, NM 87113 <a href="http://www.bendixking.com">www.bendixking.com</a>	KI 825 Color EHSI/MFD	remote	extensive outputs; GPS selected discrete, EHSI-ready discrete	1/3.0	\$17,074	Integrated EHSI, AMLCD; arc mode; 360 mode; course map; interfaces with numerous navigation systems and WX500 Stormscope. Priced for a new installation and a KCM 100.
	C113, C6d, C34e, C36e, C40C, C11a	—		3 ATI	14 - 28 VDC	
<b>Rockwell Collins</b> 400 Collins Rd. N.E. Cedar Rapids, IA 52498 (319) 295-4085 Fax: (319) 295-2297 <a href="http://www.rockwellcollins.com">www.rockwellcollins.com</a>	MCS-65 (compass system)	remote	analog including autopilot outputs; CSDB	3/6.7	\$15,608*	Digital interface with EFIS-84 CSDB. *BCA estimate.
	C6c	2.7°/min.; 7°/sec.		ATI	28 VDC	
<b>Sandel Avionics</b> 2401 Dogwood Way Vista, CA 92081 (877) 726-3357 (760) 727-4900 Fax: (760) 727-4899 <a href="http://www.sandel.com">www.sandel.com</a>	SN3500 Primary Navigation Display	remote	N/A	1/2.9	\$13,407	3 ATI primary navigation display; sunlight readable LED backlit display with 180-deg. viewing angle and over 10,000-hr. MTBF. Combines HSI, RMI, color moving map and other features. Accepts synchro, stepper motor and ARINC 429 gyro inputs. Designed to work with a wide variety of digital and analog NAV, GPS/WAAS, DME, ADF and marker beacon receivers. Compatible with the WX-500 Stormscope. Optional interfaces for traffic, \$980; WSI data-link weather, \$980; high-vibration version, \$16,829. NVIS compatible version, \$20,800.
	C113, C6d, C34e, C35d, C36e, C40e, C41d, C118, C119B	N/A		3 ATI	11-33 VDC; 33 W	
	SN4500 Primary Navigation Display	remote	analog	1/3.5	\$20,950	Sunlight readable LED backlit display with 180-degree viewing angle and over 10,000-hour MTBF. Combines HSI, RMI, color moving map and other features. Accepts synchro, stepper motor and ARINC 429 gyro inputs. Designed to work with a wide variety of digital and analog NAV, GPS/WAAS, DME, ADF and marker beacon receivers. Compatible with the WX-500 Stormscope. TACAN interface available. Optional interfaces for traffic, \$714; WSI datalink weather, \$714; high-vibration version, \$23,800. NVIS compatible version, \$27,050.
	C113, C6d, C34e, C36e, C40e, C41d, C118, C119B	N/A		4 ATI	22-33 VDC; 40 W	

## AUTOMATIC DIRECTION FINDERS

Manufacturer	Model	Frequencies	Nav Outputs	Units/Weight (lb.)	Price	Remarks	
	TSO	Frequency Storage		Size or Form Factor	Power Required		
		Display					
<b>Honeywell Aerospace</b> Bendix/King Avionics 9201 San Mateo Blvd. Albuquerque, NM 87113 <a href="http://www.bendixking.com">www.bendixking.com</a>	Bendix/King KR 87	200-1799 kHz	analog	1/6.7 P/M	\$7,192	Times flight and approaches; slaved indicator and RMIs available as options. Includes KA 44B antenna.	
		nvm		6.25 x 1.3 x 11.23	11-33 VDC		
	C41c	gas discharge					
<b>Rockwell Collins</b> 400 Collins Rd. N.E. Cedar Rapids, IA 52498 (319) 295-4085 Fax: (319) 295-2297 <a href="http://www.rockwellcollins.com">www.rockwellcollins.com</a>	ADF-60A	CTL-62 190-1750 kHz (4-kHz steps)	RMI	2/6.0	\$18,932*	Remote-mount; dual antenna optional. Digital tuning. Includes ANT-60A, CAD-62. *Dual system, \$38,088.	
		6 frequencies; nvm		% ATR-SL	28 VDC		
	C41c	gas discharge, 2 frequencies					
	ADF-462	CTL62 190-1799 kHz and 2182 kHz emergency freq.	RMI	3/8.0	\$18,936*	Built-in diagnostics; compatible only with CSDB or ARINC 429 controls; digital signal processing; dual antenna optional. Includes ANT-462A.*Dual system, \$38,056 includes two receivers, two controls, one antenna.	
		6 frequencies; nvm		% ATR-SL	28 VDC		
	C41d	gas discharge					

## AUTOMATIC DIRECTION FINDERS

Manufacturer	Model	Frequencies	Nav Outputs	Units/Weight (lb.)	Price	Remarks
		Frequency Storage				
	TSO	Display		Size or Form Factor	Power Required	
<b>Rockwell Collins</b> 400 Collins Rd. N.E. Cedar Rapids, IA 52498 (319) 295-4085 Fax: (319) 295-2297 <a href="http://www.rockwellcollins.com">www.rockwellcollins.com</a>	<b>ADF-4000</b>	190-1799 kHz 2182 kHz emergency freq.	CSDB ARINC 429	3/6.4	\$18,272*	Built-in diagnostics; compatible only with CSDB or ARINC 429 controls; digital signal processing; dual antenna optional. Includes ANT-462A. *Dual system, \$36,728.
		6 frequencies; nvm				
	C41d	gas discharge		2 MCU	28 VDC	
<b>Cobham Electronics</b> 6400 Wilkinson Dr. Prescott, AZ 86301 (928) 708-1550 (928) 541-7627 <a href="http://www.wulfsbeg.com">www.wulfsbeg.com</a>	<b>DFS-431</b> <b>TSO C-41C</b>		Arinc 429, analog	5.6 6.7 x 2.85 x 13.8	18-33 VDC \$4,890*	Arinc 429 bus, AFCS interface; steering guidance to/from NDB. Self-diagnostics and auto-calibration.  LCD color display; power; gray or black panel  *BCA estimate.
		190-1860 kHz 2181-2183 kHz				
	<b>AT-434A</b> Antenna			0.60 3.15 x 2.50 x 4.29	5 VDC, 5 VAC or 28 VDC \$6,020*	

## NAVIGATION RECEIVERS (PANEL- AND REMOTE-MOUNT)

Manufacturer	Model	Channel Display	Nav Outputs	Units/Weight (lb)	Price	Remarks
		TSO	Channel Storage	GS/MB	Size or Form Factor	Power Required
<b>Honeywell Aerospace</b> Bendix/King Avionics 9201 San Mateo Blvd. Albuquerque, NM 87113 <a href="http://www.bendixking.com">www.bendixking.com</a>	<b>Bendix/King KNR 634A</b>	gas discharge	ARINC 429 CDI, HSI, RMI	2/6.5	\$37,734	Synchro-interface KNI 582 RMI optional. Digital display of active/standby frequencies.
	C40a, C36c, C34c, C35d	2 nav; nvm		3.0 x 5.0 x 10.0	28 VDC	
<b>Rockwell Collins</b> 400 Collins Rd. N.E. Cedar Rapids, IA 52498 (319) 295-4085 Fax: (319) 295-2297 <a href="http://www.rockwellcollins.com">www.rockwellcollins.com</a>	<b>VIR-4000</b>	CTL-32 gas discharge	CSDB ARINC 429	2/3.9	see remarks	Special order item and pricing. Combines ADF and VOR/ILS/MKR receivers in a single package. Internal diagnostics capability.
	C34e, C36e, C40c, C35d	6 frequencies; nvm	N/A	2.5 MCU	28 VDC	
	<b>NAV-4500</b>	CTL-32 gas discharge	CSDB ARINC 429	2/4.1	\$23,560*	Built-in diagnostics; compatible only with CSDB or ARINC 429 controls; digital signal processing; includes CTL-32 (\$4,904); meets Eurocontrol FM immunity standards only. RTU 4200, \$23,880. *BCA estimate.
	C34e, C36e, C40c, C35d	6 frequencies; nvm	N/A	2.5 MCU	28 VDC	
	<b>VIR 32</b>	CTL-32 gas discharge	SIN/COS serial digital; RMI compatible	2/5.7	\$28,400*	Replaces VIR-30A directly; includes serial digital control; digital signal processing; built-in diagnostics; rotor modulation filter optional (strap). Includes CTL-32. Meets FM immunity requirements. *Other configurations will determine final price.
	C34c, C35d, C36d, C40b	6 frequencies; nvm		¾ ATR-SL	28 VDC, 26 VAC, 400 Hz	
	<b>VIR 432</b>	CTL-32 gas discharge	serial digital	2/5.7	\$31,896*	Built-in diagnostics; compatible only with CSDB or ARINC 429 controls; includes CSDB control, digital signal processing. Includes CTL-32. Meets Eurocontrol FM immunity requirements. *Other configurations will determine final price.
	C34d, C35d, C36d	6 frequencies; nvm		¾ ATR-SL	28 VDC, 26 VAC, 400 Hz	
	<b>NAV-4000</b>	CTL-32 gas discharge	CSDB ARINC 429	2/4.7	\$32,532*	Built-in ADF; built-in diagnostics; compatible only with CSDB or ARINC 429 controls; digital signal processing; meets Eurocontrol FM immunity standards. *Configuration will determine price.
	C34e, C36e, C40c, C35d, C41d	6 frequencies; nvm	N/A	2.5 MCU	28 VDC	

## NAVIGATION RECEIVERS (PANEL- AND REMOTE-MOUNT)

Manufacturer	Model	Channel Display	Nav Outputs	Units/Weight (lb)	Price	Remarks
	TSO	Channel Storage	GS/MB	Size or Form Factor	Power Required	
<b>Cobham Electronics</b> 6400 Wilkinson Dr. Prescott, AZ 86301 (928) 708-1550 (928) 541-7627 <a href="http://www.wulfsberg.com">www.wulfsberg.com</a>	<b>CVN-251</b>	108.0-117.95 MHz	ARINC 429 SIN/COS	1/3.31 4.0 x 2.4 x 13.33	\$23,200*	ARINC 429 bus interface; 160 VOR channels; 40 LOC channels; includes glideslope/marker beacon receivers. FM immunity standard. *BCA estimate.
	C40c, C36e, C34c, C35d	LCD		1/0.75 2.5 x 3.15 x 4.29	18-33 VDC	
	<b>CVC-152 Control Display</b>	108.0-117.95 MHz	ARINC 429 SIN/COS	1/3.31 4.0 x 2.4 x 13.33	\$4,890*	Combines comm and nav tuning; gray or black panel. *BCA estimate.
		LCD		1/0.75 2.5 x 3.15 x 4.29	5 VDC, 5 VAC or 28 VDC	
	<b>CCN-955</b>	108.0-117.95 MHz	ARINC 429 SIN/COS	1/3.31 4.0 x 2.4 x 13.33	\$9,540*	Combines comm and nav tuning. *BCA estimate.
		LCD		1/0.75 2.5 x 3.15 x 4.29	5 VDC, 5 VAC or 28 VDC	

## DISTANCE MEASURING EQUIPMENT

Manufacturer	Model	Channel Display	Nav Outputs	Units/Weight (lb.)	Price	Remarks
	TSO		Power Outputs (peak W)	Size or Form Factor	Power Required	
<b>Honeywell Aerospace</b> Bendix/King Avionics 9201 San Mateo Blvd. Albuquerque, NM 87113 <a href="http://www.bendixking.com">www.bendixking.com</a>	<b>Bendix/King KN62A</b>	gas discharge	serial data	1/2.6 P/M	\$8,572	Includes antenna and installation kit; accepts remote channeling. Distance accuracy: ±0.1 nm nominal to 99 nm, ±1.0 nm, 100 to 389 nm.
			100	6.3 x 1.3 x 12.3	11-33 VDC	
	<b>Bendix/King KN63</b>	gas discharge	serial data	2/3.6	\$13,801	Includes KDI 572 indicator, optional slaved indicator. Distance accuracy: ±0.1 nm nominal to 99 nm, ±1.0 nm, 100 to 389 nm.
	C66a		100	6.5 x 1.1 x 11.55	11-33 VDC	
	<b>Bendix/King KDM 706A</b>	gas discharge, slaved indicators	ARINC 429 ARINC 568	2/6.3	\$24,093	Includes KDI 572 indicator; optional slaved indicator; kits-mounts not included.
	C66b		250	3.0 x 5.25 x 12.8	28 VDC	
<b>Rockwell Collins</b> 400 Collins Rd. N.E. Cedar Rapids, IA 52498 (319) 295-4085 Fax: (319) 295-2297 <a href="http://www.rockwellcollins.com">www.rockwellcollins.com</a>	<b>DME-42</b>	gas discharge, serial digital 2 x 5 tuning	ARINC 568 serial digital	2/6.2	\$18,896*	Includes two-digit-code diagnostics; directly replaces DME-40; tracks three channels simultaneously when used with CTL-32 and IND-42A (special order only) (CTL-32 controls nav receiver); digital signal processing; echo monitor. IND-42A indicator included. Displays 0-300 nm; 0-999 knots; 0-120 min. *BCA estimate.
	C66b		300	1/2 ATR-SL	28 VDC	
	<b>DME-442</b>	gas discharge	ARINC 568 serial digital (CSDB) ARINC 429	2/6.2	\$22,156*	Tracks three channels simultaneously when linked to CTL-32, IND-42A; decodes and displays station ident; digital signal processing; echo monitor; built-in diagnostics; includes IND-42A (special order only). *BCA estimate.
	C66b		300	1/2 ATR-SL	28 VDC	
	<b>DME-4000</b>	gas discharge	CSDB ARINC 429	2/4.4	\$20,100*	Tracks three channels simultaneously when linked to CTL-32, IND-42; decodes and displays station ident; digital signal processing; echo monitor; built-in diagnostics; includes IND-42. *BCA estimate.
	C66c		300	2.5 MCU	28 VDC	
<b>Cobham Electronics</b> 6400 Wilkinson Dr. Prescott, AZ 86301 (928) 708-1550 (928) 541-7627 <a href="http://www.wulfsberg.com">www.wulfsberg.com</a>	<b>CDM-451 FliteLine</b>	LCD	3 ARINC 429 2 ARINC 568 1 40-bit serial	1/3.6	\$24,500*	Three-channel scanning. ARINC 429 interface; nav frequency display in DME hold mode; six-wire analog continuous self-test. SD-442B display, \$7,630. Available with NVG option. *BCA estimate.
	C66c		325	3.87 x 3.27 x 13.33	18-33 VDC	

## LONG-RANGE NAV/COMS

Manufacturer	Model	Inputs	Units/Weight (lb.)	Price	Remarks	
	System Type	Outputs	Size or Form Factor	Power Required		
	TSO					
<b>Avidyne</b> 55 Old Bedford Rd. Lincoln, MA 01773 (781)402-7400 (800) AVIDYNE Fax: (781) 402-7599 <a href="http://www.avidyne.com">www.avidyne.com</a>	<b>IFD 540</b>	VHF Com; VOR-LOC-ILS; GPS SBAS-WAAS	1/7.2	\$16,995	Designed as a drop-in replacement for the GNS 530 and 530W navigators, but with a larger display and touch-screen interface. 5.7-in. VGA (640 x 480) LED. 16 channel GPS/SBAS receiver with 1,000 user-defined waypoints/99 flightplans. Optional TAWS-B, \$7,995; optional 16 W VHF transceiver, \$4,995.	
		GPS receiver with WASS (SBAS) capability, VOR/ILS/LOC receiver, VHF com	—	28 VDC 10-watt VHF Com (16-watt option available)		
		C34e, C36e, C40c, C110a, C113, C118, C146c, C147, C151b, C157, C165, C169a	1.95 x 6.3 x 1.3			
<b>Esterline CMC Electronics</b> 600 Dr. Frerederik Philips Blvd. Montreal, Quebec Canada H4M 2S9 (514) 748-3184 Fax: (514) 748-3100 <a href="http://www.cmcelectronics.ca">www.cmcelectronics.ca</a>	<b>CAM-5024 GLSSU</b>	ARINC 429 (compiles with ARINC 743A)/ARINC 429	1/5.5	\$20,000	Standalone LPV solution with CMA-5025 control head; no FMS or EFIS modification required.	
		GPS receiver with SBAS and LPV	—	28 VDC		
		C145b Beta-3 C146b Delta-4	ARINC 429	N/A		
<b>Honeywell Aerospace</b> 1944 East Sky Harbor Circle Phoenix, AZ 85034 (800) 601-3099 Fax: (602) 365-3343 <a href="http://www.honeywell.com">www.honeywell.com</a>	<b>Laseref V Micro IRS</b>	ARINC 429	2/9.9	\$297,633	All digital; passive cooling; automatic mode control; align-in-motion when supplied with ARINC 743A GPS imputs.	
	Laser Gyro IRS	—	—	—		
	C4c, C5e, C6d	ARINC 429	6.6 x 6.4 x 6.3	28 VDC		
	<b>GR-550</b>	ARINC 429	1/6.0	\$46,641	Complies with ARINC 743A; integral satcom filter, 24 channels.	
	GPS sensor	—	—	—		
	C-129 B1/C1	ARINC 429 (ARINC 743A)	2.6 x 8.5 x 9.5	28 VDC 115 VAC		
	<b>Laseref IV</b>	ARINC 419/429	2/16.9	\$348,968	All digital; 4 MCU ARINC 704.	
	Laser Gyro IRS	—	—	—		
	C4c, C5e, C6d	ARINC 429/ASCB	4.9 x 7.6 x 13.1	28 VDC or 115 VAC		
	<b>Special Missions Laseref V</b>	ARINC 429	2/9.9	\$323,111		
	N/A	—	—	—		
	N/A	ARINC 429	6.6 x 6.4 x 6.3	28 VDC		
<b>ICG (International Communications Group, Inc.)</b> 230 Pickett's Line Newport News, VA 23603 (757) 947-1030 Toll free: (800) 279- 1991 (Fax: (757) 947-1035 <a href="http://www.icg.aero">www.icg.aero</a>	<b>NxtLink ICS-120A Satcom Terminal</b>	ARINC 429; audio tip/ring; audio 4 wire; RS-232; Discretes: RF, USB; mainenance port; remote SIM and configuration	Single 2 MCU rack/6.3 lb. 15.98 x 2.33 x 7.75	\$35,840 28 VDC	Dual-transceiver device that combines a single channel of global voice and 2400 bps data service with a second Short Burst Data (SBD) channel in a single 2MCU LRU. The system provides the flight crew with an exclusive global voice channel and a dedicated data link channel to support ACARS, FANS messaging, ADS-C and CPDLC.	
	<b>NxtLink ICS-220A Satcom Terminal</b>	ARINC 429; audio tip/ring; audio 4 wire; RS-232; Discretes: RF, USB; mainenance port; remote SIM and configuration	Single 2 MCU rack/6.3 lb. 15.98 x 2.33 x 7.75	\$47,295 28 VC	Three-transceiver unit combines dual channels of global voice and 2400 bps data service with a third Short Burst Data (SBD) channel in a single 2MCU LRU. The system provides the flight crew with an exclusive global voice channel and a dedicated data link channel to support ACARS, FANS messaging, ADS-C and CPDLC.	
<b>Rockwell Collins</b> 400 Collins Rd. N.E. Cedar Rapids, IA 52498 (319) 295-4085 Fax: (319) 295-2297 <a href="http://www.rockwellcollins.com">www.rockwellcollins.com</a>	<b>GPS-4000S</b>	ARINC 429 (compiles with ARINC 743A)	N/A	\$32,576*	*BCA estimate.	
		GPS receiver w SBAS (WAAS) capability	—	—		
		C145A Class Beta-3	ARINC 429	2 MCU		

## LONG-RANGE NAV/COMS

Manufacturer	Model	Inputs	Units/Weight (lb.)	Price	Remarks
	System Type				
	TSO	Outputs	Size or Form Factor	Power Required	
<b>TrueNorth Avionics, Inc.</b> 1682 Woodward Dr. Ottawa, Ontario Canada K2C 3R8 (613) 224 3301 Toll free in U.S. & Canada: (877) 610-0110 Fax: (613) 224-0954 <a href="http://www.truenorthavionics.com">www.truenorthavionics.com</a>	<b>Simphone Data Link Unit</b>	ARINC 429	1/1.6 lb.	\$19,900	Features a built-in Iridium satcom transceiver. Compatible with many FMS systems to provide FANS-capable Iridium data link without impacting cabin communications.
	FANS-1/A FANS over Iridium				
	RTCA DO-178B Level D; RTCA DO-262A TSO-C159a (pending)	Iridium	8.5 x 5.0 x 1.85	28 VDC	

## TRANSPONDERS

Manufacturer	Model	Modes	Units/Weight (lb.)	Price	Remarks
	TSO	Power Output (W)	Size or Form Factor	Power Required	
<b>ACSS, an L-3 Communications and Thales Company</b> 19810 N. 7th Ave. Phoenix, AZ 85027 (623) 445-7001 <a href="http://www.acss.com">www.acss.com</a>	<b>Mode S RCZ-852</b>	TCAS/Mode S/Fit ID control panel; RMU (Primus II radios)	5.0	\$67,867	Elementary and Enhanced Surveillance (ELS/EHS) and DO 260 compliant. Certified on many regional and business jets.
	C112	CTL92A/T/E	3.5 x 4.2 x 14.1	28 VDC	
	<b>Mode S ATDL XS-950</b>	TCAS/Mode S/Fit ID control panel; CTL92A/T/E	1/11.5	\$88,647	DO-260B compliant. Elementary and enhanced surveillance (ELLS/EHS). Certified on many business jet and air transport category aircraft.
	C112		4 MCU	28 VDC	
<b>Avidyne Corp.</b> 55 Old Bedford Rd. Lincoln, MA 01773 (781) 402-7400 (800) AVIDYNE Fax: (781) 402-7599 Info @avidyne.com <a href="http://www.avidyne.com">www.avidyne.com</a>	<b>AXP340</b>	Mode A/C/S with extended squitter; ADS-B OUT	1/2.98	\$5,995	Panel-mounted Class 1 Mode S Level 2 data-link transponder, with support for 1090 MHz Extended Squitter (ES), that meets all the current requirements for Mode S elementary surveillance transponders. Developed as a slide-in replacement for existing KT76A/KT78A transponders, the AXP340 is designed to easily upgrade existing Mode A/C equipment to Mode S, while adding additional functionality like a direct-entry numeric keypad, pressure altitude and GPS Lat/Lon readout, Flight ID entry, one-touch VFR code entry, a stop watch timer/flight timer, and altitude alerter. Supports the latest Version 2 1090 MHz Automatic Dependent Surveillance Broadcast (ADS-B) Extended Squitter (ADS-B out).
	C166b, ETSO 2C112b, ETSO C166b	240	6.3 x 1.57 x 9.4	10 -33 VDC	
<b>Garmin International</b> 1200 E. 151st St. Olathe, KS 66062 (800) 800-1020 (913) 397-8200 Fax: (913) 397-8282 <a href="http://www.garmin.com">www.garmin.com</a>	<b>GTX 330</b>	A, C, S	1/3.0	\$4,995	Solid-state Mode-S, keypad entry, remote ident, pressure altitude, density altitude and OAT display, front-panel entry for flight ident, altitude monitor with voice alert, flight timers. TIS compatible in the United States.
	C112 CC166a, Class 2A	250	1.6 x 6.25	11-33 VDC	
	<b>GTX 330D</b>	A, C, S	1/3.0	\$9,995	Diversity Mode-S, solid-state keypad entry, remote ident, front panel entry for flight ident, altitude monitor with voice alert, flight timers. TIS compatible in the United States.
	C112 Class 2A	250	1.6 x 6.25 x 9.75	11-33 VDC	
	<b>GTX 327</b>	A, c	1/3.1	\$2,665	Panel mount Mode-C, solid-state keypad entry; dedicated pushbutton keys for squawk code selection; dedicated VFR squawk key and pilot selectable data field.
	C74c, Class 1A	200	6.25 x 1/65 x 8.73	11-22 VDC	
	<b>GTX 33</b>	A, C	1/2.2	\$2,645	Remote mount, solid-state, remote ident capability, flight timers.
	C74c, Class 1A	200	1.71 x 6.30 x 8.78	11-33 VDC	
	<b>GTX 327</b>	A, C	1/3.1	\$2,665	Panel-mount Mode C, solid-state, keypad entry, dedicated pushbutton keys for squawk code selection, dedicated VFR squawk key and pilot selectable data field.
	C74c, Class 1A	200	6.25 x 1.65 x 8.73	11-22 VDC	

## TRANSPONDERS

Manufacturer	Model	Modes	Units/Weight (lb.)	Price	Remarks
	TSO	Power Output (W)	Size or Form Factor	Power Required	
<b>Honeywell Aerospace</b> Bendix/King Avionics 9201 San Mateo Blvd. Albuquerque, NM 87113 <a href="http://www.bendixking.com">www.bendixking.com</a>	<b>Bendix/King KT 76A</b>	A, C	1/3.1	\$2,265	Automatic reply-light dimmer; system test; remote ident capability adapter available.
	C47c; Class 1B	250	6.25 x 1.6 x 10.0	14 or 28 VDC	
	<b>Bendix/King KT 76C</b>	A, C	1/3.1	\$3,286	Slide-in replacement for KT 76A. Programmable VFR code; remote ident capability; gas-discharge digital display; pushbutton code entry.
	C47c	250	6.25 x 1.63 x 10.73	11-33 VDC	
	<b>Bendix/King KT 73</b>	A, C, S, TIS	1/3.6	\$6,399	Mode S data link with TIS. Meets European Elementary Surveillance mandate (non-diversity).
	C112	200	6.25 x 1.63 x 10.82	10-32 VDC	
	<b>Bendix/King KT 70</b>	A, C, S	1/3.9	\$6,958	Mode S transponder; non-diversity surveillance only; includes discrete address memory module; displays encoding altimeter output; gas discharge display.
	C112; Class 1A	250	6.25 x 1.63 x 10.0	11-33 VDC	
	<b>Bendix/King MST 67A</b>	A, C, S	2/8.5	\$45,434	Mode S diversity transponder.
	C37c/C38c C74c; Class 3A	250-625	14.0 x 3.0 x 8.9	115 VAC; 400 Hz	
<b>Rockwell Collins</b> 400 Collins Rd. N.E. Cedar Rapids, IA 52498 (319) 295-4085 Fax: (319) 295-2297 <a href="http://www.rockwellcollins.com">www.rockwellcollins.com</a>	<b>TDR-94D</b>	S	2/9.7	\$335,068*	Mode S transponder; European Elementary and Enhanced Surveillance compliant. Compatible with TCAS II Change 6.04 and Change 7.0 systems. DO-260A ADS-B transmit compliant. Includes CTL-92E flight ID capable control panel. *BCA estimate.
	C112; Class 3	250-625	4.9 x 3.3 x 12.5	28 VDC	

## WEATHER RADAR

Manufacturer	Model	Ranges	Dish Size & Beam Width (in./deg.)	Scan	Stablzn.	Display Interface	Scope (dia./in.)	Units/Weight	Price	Remarks	
	TSO			Pulse Width	Stabl. Sig.						
	Circuits			Looks/Min.	Ant. Tilt						
<b>Garmin International</b> 1200 E. 151st St. Olathe, KS 66062 (800) 800-1020 (913) 397-8200 Fax: (913) 397-8282 <a href="http://www.garmin.com">www.garmin.com</a>	<b>GWX 68</b>	Selectable 2.5, 5, 10, 20, 40, 80, 160 and 320 nm (MX 20; GMX 200)	10/9 12/7.8 7kW	20, 40, 60 or 90° (G1000)	±30°	Garmin HSDB and ARINC 429/ 453	N/A	12 in./ 9.1 10 in./ 9.0	\$21,995 (\$12 in.) \$20,995 (\$10 in.)	Vertical scan feature: looks horizontally or vertically on bearing line selected by pilot. WATCH feature identifies the shadowing effects of short range cell activity; Automatic Target Alert feature looks ahead for intense cell activity in 80-320 nm range.	
	C63c	20 or 90° (MX 20 and GMX 200)		30-220 mV/ degree ARINC 429 HSDB							
	Vertical scan, ext. STC, WX alert, atten. comp., variable gain - WX and map modes, WATCH	1 & 4 microseconds		±15°		4	6 in. & 10 in. diag.	Width: 10.0 in. Depth: 6.3 in.	4/28 VDC, 60 W 8-28 VAC 400 Hz		
<b>Honeywell Aerospace</b> Bendix/King Avionics 9201 San Mateo Blvd. NE Albuquerque, NM 87113 <a href="http://www.bendixking.com">www.bendixking.com</a>	<b>Bendix/King ART 2000</b>	10, 20, 40, 80, 160	10/10 12/8 15 4	90° or 100°	30°	KMD 850 EFIS	N/A	1/9.9	\$18,228	Vertical profile feature: scans horizontally or vertically on track line selected by pilot. Alphanumeric display of range, function and tilt angle.	
	C63c			4	20-220 mv/det.	4	N/A	10.28 dia.	28 VDC; 10, 26, 115 VAC, 400 Hz		
	Vertical profile, ext. STC, tgt., wx alert, atten., comp., variable gain-map mode	ARINC 429		±15°							
	<b>Bendix/King RDR 2100</b>	5, 10, 20, 40, 80, 160, 240, 320		90°, 100°, 120°	±30° pitch & roll	KMD 850 EFIS	N/A	1/9.9	\$20,552	Vertical profile feature: scans horizontally or vertically on track line selected by pilot; Alphanumeric display of range, function and tilt angle. KMD 850 MFD, \$13,440.	
	C63c			range dependent	20/220 mv/deg. ARINC 429						
	Vertical profile; extended STC; wx attenuation compensation; variable gain in map mode; wx alert; autotilt	6.0		15	±15°	5	N/A	10.28 dia.	28 VDC; 10, 26, 115 VAC, 400 Hz		
	<b>Primus 660</b>	2.5, 5, 10, 25, 50, 100, 200, 300	12/7.9 18/5.6	60° or 120°	±30°	ARINC 453/708 checklist, data nav, EFIS, MFD, LSZ-860	4	2/15.8	\$81,690	Single receiver/transmitter/antenna pedestal.	
	C83c			2	50 or 200 mv/deg. or ARINC 429						
	REACT; GMAP target alert, preset & variable gain			12/24	±15°	4	4.81 x 6.25 x 12.24	5.0 x 7.6 x 15.0	28 VDC		
<b>Honeywell Aerospace</b> Primus 880 Bendix/King Avionics 9201 San Mateo Blvd. NE Albuquerque, NM 87113 <a href="http://www.bendixking.com">www.bendixking.com</a>	<b>Primus 880</b>	2.5, 5, 10, 25, 50, 100, 200, 300	12/7.9 18/5.6 24/4	60° or 120°	±30°	ARINC 453/708 checklist, data nav, EFIS, MFD, LSZ-860	5	2/15.8	\$125,054	Single receiver/transmitter/antenna pedestal.	
	C63c			2	50 or 200 mv/deg. or ARINC 429						
	Doppler turb. detect., compensated, tilt, RE-ACT, GMAP target alert, preset & variable gain	10		12/24	±15°	5	4.8 x 6.25 x 12.24	5.0 x 7.6 x 15.0	28 VDC		
	<b>Primus 700A</b>	½, 1, 2.5, 5, 10, 25, 50, 100, 200, 300	10/10, 12/7.9, 10 x 14/ 10 x 7.1, 18/5.6, 24/4	60° or 120°	±30	ARINC 429/708 checklist, data nav, EFIS, lightning sensor LSZ-860	5	4/37	\$198,654	Short-range and high resolution system for special search and surveillance missions, displayed menus. Minimum detect range at 450 ft. Allows full dual-mode operation for pilot and copilot. Price reflects typical system.	
	C63c			6	50 or 200 mv/deg. or ARINC 429						
	REACT; ground & sea clutter red.; turb. detect.-preset & variable gain	10		12/24	±15°	5	4.81 x 6.25 x 12.24	5.0 x 7.6 x 15.0	28 VDC; 400 Hz		

## WEATHER RADAR

Manufacturer	Model	Ranges	Dish Size & Beam Width (in./deg.)	Scan	Stablzn.	Display Interface	Scope (dia./in.)	Units/Weight	Price	Remarks
	TSO			Pulse Width	Stabl. Sig.					
	Circuits			Looks/Min.	Ant. Tilt					
<b>Honeywell Aerospace</b> Bendix/King Avionics 9201 San Mateo Blvd. NE Albuquerque, NM 87113 <a href="http://www.bendixking.com">www.bendixking.com</a>	Primus 701A	½, 1, 2.5, 5, 10, 25, 50, 100, 200, 300	10/10, 12/7.9, 10 x 14/10 x 7.1, 18/5.6, 24/4	60° or 120°	±30°	ARINC 429/709 checklist, data nav, EFIS, lightning sensor	5	4/39	\$207,064	Short-range and high-resolution system for special search and surveillance missions; displayed menus and AC 90-80A specified clear zones. Allows full dual-mode operation for pilot and copilot. Price reflects typical system.
	C63c, C102			6	50 or 200 mv/deg, or ARINC 429					
	REACT; ground clutter reduction; turbulence detection; preset & variable gain			12/24	±15°		6	4.81 x 6.25 x 12.24	5.0 x 7.6 x 15.0	28 VDC; 115 VAC, 400 Hz
<b>Rockwell Collins</b> 400 Collins Rd. N.E. Cedar Rapids, IA 52498 (319) 295-4085 Fax: (319) 295-2297 <a href="http://www.rockwellcollins.com">www.rockwellcollins.com</a>	RTA-4112	5-320 nm	12/8	60°	±15° tilt	ARINC 708A	N/A	1/15.1	\$175,720	
	C63c			3.44-55usec	—					
	—			—	—		4	—	12 in.	80 W avg.
	RTS-4114	5-320 nm	14/6.7	60°	±15° tilt	ARINC 708A	N/A	1/15.4	\$178,784	
	C63c			3.44-55usec	—					
	—			13	—		4	varies by indicator	14.0	80 W avg.
	RTS-4118	5-320 nm	18/5.2	60°	±15° tilt	ARINC 708A 950	N/A	1/17.0		
	C63c			3.44-55usec	—					
	—			—	—		4	—	18.0	80 W avg.

## RADAR ALTIMETERS

Manufacturer	Model	Alt. Range	Accuracy	Display	Units/Weight (lb.)	Price	Remarks
	TSO	Pitch/Roll Limits				Power Required	
<b>FreeFlight Systems</b> 3700 Interstate 35 S. Waco, TX 76706 (254) 662-0000 Fax: (254) 662-9450 <a href="http://www.freeflightsystems.com">www.freeflightsystems.com</a>	RA-4000 and RA-4500	-20-2,500 ft.	0 to 100 ft. ±3 ft. 100 to 500 ft. ±3% 500 to 2,000 ft. ±5%	RAD-40 Radar Altimeter display compatible with the RA-4000 and RA-4500	2/2.27	N/A	RA-4000 provides RS 485/422 and RS 232C outputs; RA-4500 provides ARINC 429, RS 485/422 and RS 232 outputs. Two-year warranty. Optional night vision goggle (NVG) compatible display and round faceplate adapter for display. Optional 1/2 ATI (TSO'd) RAD-40 indicator, \$3,055; when purchased with RA-4000, \$11,190. RAD-40/RA 4500 w/installation kit, \$12,699.
	C87	±20°/±30°				28 VDC	
<b>Honeywell Aerospace</b> Bendix/King Avionics 9201 San Mateo Blvd. NE Albuquerque, NM 87113 <a href="http://www.bendixking.com">www.bendixking.com</a>	Bendix/King KRA 405B	-20-2,000 ft.	0-100 ft., 34 ft or 3%, whichever is greater; 500-2,500 ft., ±5%	pointer dial	2/10.7	\$31,562	Compatible with Honeywell Mark VI GPWS/EGPWS continuous DH set; tracking to 2,500 feet; expanded helicopter version available; night-vision goggle version available. Optional built-in tone generator.
	C87	±20°/±25°				28 VDC	
<b>Rockwell Collins</b> 400 Collins Rd. N.E. Cedar Rapids, IA 52498 (319) 295-4085 Fax: (319) 295-2297 <a href="http://www.rockwellcollins.com">www.rockwellcollins.com</a>	ALT-1000	0-2,500 ft	±2 ft or 2%	Analog only outputs*	2/6.8	\$17,988	*Requires separate converter for use with ARINC 429 systems.
	C87	±40°/±50°				28 VDC	
	ALT-4000	0-2,500 ft.	±2 ft or 2%	EFIS (analog version available)	2/6.8	\$30,728	Interfaces to EFIS high-intensity monitor for Cat II/III certification. Includes two ANT-52 antennas.
	C87	±40°/±50°				28 VDC	

## THUNDERSTORM DETECTION SYSTEMS

Manufacturer	Model	Search Arc	Information Display	Display Size	Price	Remarks
	TSO	Max Range		Units/Weight	Power Required	
<b>Avidyne Corp.</b> 1944 East Sky Old Bedford Rd. Lincoln, MA 01733 (781) 402-7400 Fax: (781)402-7599 <a href="http://www.avidyne.com">www.avidyne.com</a> info@avidyne.com	<b>TWX670</b>	N/A	lightning strikes are displayed with range bearing and intensity (color). TWXCell mode highlights the most intense regions of thunderstorm activity, presenting a visually contoured color display with dynamic sectors.	see Avidyne MHD300, EX500 Specifications. 7 each RS 323 outputs. Also compatible for monochrome strikes on many legacy RS 232-capable lightning detection system displays.	\$7,995	Third-generation lightning detection system with digital signal processing and noise immunity. Shows lightning from 0 nm - 200 nm including critical 0 nm - 25 nm range for added tactical benefit. Eliminates radial spread associated with older technology systems. Exclusive TWXCell display provides a dynamic map of the lightning discharge rate and density.
	C110	200 nm			16-35 VDC	
<b>Honeywell Aerospace</b> 1944 East Sky Harbor Circle Phoenix, AZ 85034 (800) 601-3099 Fax: (602) 365-3343 <a href="http://www.honeywell.com">www.honeywell.com</a>	<b>LSZ-860</b>	60°, 120°, 360°	three unique symbols represent three rates of occurrence for vertical lightning in a specific area	displays on Honeywell EFIS of various sizes	\$36,209	Price shown is for typical system.
	C110	100 nm		2/6.5	28 VDC	
<b>L-3 Avionics Systems</b> 5353 52nd St. S.E. Grand Rapids, MI 49512 (616) 949-6600 Fax: (616) 285-4224 <a href="http://www.L-3avionics.com">www.L-3avionics.com</a>	<b>WX-500</b>	pilot-selectable 120° & 360°	graphical depiction of real-time lightning information in cell or strike modes	see remarks 2.5	\$7,130*	Remote-mount sensor interfaces with MFDs for graphical depiction of real-time lightning information Features 360° and 120° views, selectable ranges of 25-200 nm, input for heading stabilization and options for cell or strike mode data selection. Interfaces to MFDs via RS-422. A separate radar graphics computer (Model RGC-350) is needed for display on dedicated radar indicators. *Processor only.
	C110a	200 nm		Processor: 5.6 x 2.2 12.0	11-32 VDC	
	<b>WX-1000+ AN/AMS-2</b>	360°	CRT	3 ATI	\$18,060	Includes WX-1000+ processor and monochrome CRT display. Features include 360° and 120° viewing modes, six programmable checklists, selectable ranges to 200 nm, and can be heading stabilized with gyro input.
	C110A	200 nm		3/10.95	10-32 VDC	
	<b>WX-1000+ AN/AMS-2</b>	360°	CRT	3 ATI	\$18,060	Includes WX-1000+ processor and monochrome CRT display. Features include 360° and 120° viewing modes, six programmable checklists, selectable ranges to 200 nm, and can be heading stabilized with gyro input.
	C110A	200 nm		3/10.95	10-32 VDC	
	<b>WX-1000E (429 EFIS)</b>	360°	—	depends on EFIS system	\$18,200*	Provides output on EFIS display or radar indicator when paired with RGC35C (sold separately); includes three levels of activity, bearing and distance; optional displays for checklists. *Processor only. Price BCA estimate.
	C110a	200 nm		1/6.67	10-32 VDC	
	<b>WX-1000E (429 Navaid)</b>	360°	—	3 ATI	\$23,710	Features Arinc 429 interface to allow simultaneous display of thunderstorm information and course line to waypoints. Presentation of six user-selectable navigation items. Course deviation indicator (CDI) display. Consult manufacturer for approved interfaces.
	C110a	200 nm		2/10.95	10-32 VDC	

## BASIC AUTOPILOTS

Manufacturer	Model	Sensor Type	Attitude Modes	Nav Modes	Units/ Weight (lb.)	Price	Remarks	
	TSO	Servo Type	Roll			Power Required		
			Pitch					
<b>Cobham (S-TEC)</b> One S-TEC Way Municipal Airport Mineral Wells, TX 76067 (817) 215-7600 Fax: (940) 325-3904 <a href="http://www.s-tec.com">www.s-tec.com</a>	<b>S-TEC System ThirtyALT</b>	accelerometer	none	none	3/4.0	\$7,365		
	C9c	DC electric	altitude hold			14 or 28 VDC		
	<b>S-TEC System Forty</b>	1 rate gyro	command turn	VOR/LOC/BC, GPS tracking	3/9.0	\$8,820	Can be upgraded to System 50 or 60-2.	
	C9c	DC electric	none			14 or 28 VDC		
	<b>S-TEC System Twenty</b>	enclosed in rate gyro	command turn	VOR/LOC, GPS tracking	2/7.0	\$8,644	Can be upgraded to System 30.	
	C9c	DC electric	none			14 or 28 VDC		
	<b>S-TEC System 60-1</b>	1 rate gyro	hdg. select	VOR/LOC/BC, GPS/Loran capture and tracking	4/12.0	\$10,694	Includes interfaces with all popular HSIs. Variable bank angle with airspeed; automatic three-level radio gain; can upgrade to 60-2.	
	C9c	DC electric	none			14 or 28 VDC		
	<b>S-TEC System 60 PSS</b>	no external sensors	none	GS capture and track	4/11.0	\$11,091	Complements existing single roll-axis autopilot; auto/manual, electric trim optional, \$2,195; may be upgraded to 60-2; altitude selector/alerter optional, \$3,670.	
	C9c	DC electric	vertical speed hold; altitude hold; GS capture and track			14 or 28 VDC		
	<b>S-TEC System Fifty</b>	1 rate gyro	command turn/hdg. select optional	VOR/LOC/BC, GPS, Loran tracking	5/14.0	\$14,134	Two-axis, roll and pitch autopilot; trim condition indicator std. Manual electric trim optional, \$2,630. Can be upgraded to 60-2.	
	C9c	DC electric	altitude hold			14 or 28 VDC		
	<b>S-TEC System Thirty</b>	enclosed in rate gyro plus pitch computer	command turn	VOR/LOC/GPS/Loran tracking	5/13.0	\$13,759	DG option, \$2,495	
	C9c	DC electric	altitude hold			14 or 28 VDC		
	<b>S-TEC System 60-2</b>	1 turn coord., 1 dir. gyro	hdg. select	VOR/LOC/BC, Loran track and approach; GS capture and tracking	7/21.0	\$18,919	Interfaces with all popular HSIs. Automatic/manual electric trim optional, \$3,520; altitude/vertical speed selector/alerter optional, \$3,670; can be upgraded to flight director.	
	C9c	1 press. transducer	vertical speed and altitude hold			14 or 28 VDC		
	<b>S-TEC System FiftyFiveX</b>	1 turn coord.	hdg. select	VOR/LOC/BC, GPS/Loran tracking and GS capture	5/17.0	\$22,993	Interfaces with all popular HSIs. Automatic/manual electric trim optional, \$3,520. Altitude/vertical speed selector/alerter optional, \$3,670; can be upgraded to flight director.	
	C9c	1 press. transducer	digital vertical speed, altitude hold			14 or 28 VDC		
	<b>S-TEC System 65</b>	1 turn coord., 1 dir. gyro	hdg. select	VOR/LOC/BC, GPS/Loran capture and tracking; GS capture and tracking	9/24.0	\$42,887		
	C9c	1 press. transducer	manual and auto. modes	GS capture and tracking		14 or 28 VDC		

## INTEGRATED FLIGHT CONTROL SYSTEMS

Manufacturer	Model	Air Data	Autopilot	Power	Weight		Price	Remarks	
		Attitude Sensors	Flight Director		AP Only	AP Only			
					IFCS	IFCS			
<b>Cobham (S-TEC)</b> One S-TEC Way Municipal Airport Mineral Wells, TX 76067 (817)215-7600 <a href="http://www.s-tec.com">www.s-tec.com</a>	<b>IntelliFlight DFCS</b>	digital ADAHARS	Magic EFIS NA	14 or 28 VDC	14.5 N/A	see remarks	Dual-side EFIS and 2100 DFCS autopilot, \$146,700.* Single-side EFIS and 2100 DFCS autopilot, \$119,800*. *BCA estimate.		
<b>Garmin International</b> 1200 E. 151st St. Olathe, KS 66062 (800) 800-1020 (913) 397-8200 Fax: (913) 397-8282 <a href="http://www.garmin.com">www.garmin.com</a>	<b>GFC 700</b>	GDC 74 (B) DADC	combined	28 VDC	varies by installation	varies by installation	Digital, dual-channel fail-passive system for Cessna Mustang, Caravan, C-172, -182, -206, -350 and -400; Cirrus SR20 and SR22; Diamond DA40; DA42; Embraer Phenom 100 and 300; HBC G36 and G58; Mooney M20R and M20S; Socata TBM 850 and HondaJet.		
		GRS 77 AHRS							
<b>Honeywell Aerospace</b> 1944 East Sky Harbor Circle Phoenix, AZ 85034 (800) 601-3099 Fax: (602) 365-3343 <a href="http://www.honeywell.com">www.honeywell.com</a>	<b>Primus 1000</b> (in remarks)	micro DADC	IC-600	28 VDC	varies by installation	varies by version	Digital fail-passive system. CAT II-capable; ARINC 429 interfaces, two-, three-, four- or five-tube, 8 in. x 7 in. EFIS. Bombardier Learjet 40, 45 and 45XR; Embraer ERJ-135, 140 and 145; Cessna Bravo, Encore, Excel and Ultra.		
		digital AHRS or IRS	combined		varies by installation	varies by version			
	<b>Primus 1000 CDS</b>	micro DADC	IC-615	28 VDC	varies by installation	varies by installation	Digital fail-passive system. CAT II-capable; ARINC 429 interfaces; two- to five-tube 10 in. x 8 in. LCD EFIS. Cessna Citation XLS.		
		digital AHRS	combined		varies by installation	varies by installation			
	<b>Primus 2000</b>	micro DADC	IC-800	28 VDC	varies by installation	varies by version	Digital, dual-channel fail-passive system. CAT II-capable w/optional auto-throttle, dual-sensor monitoring; five- or six-tube 8 in. x 7 in. CRT EFIS. Global Express and Global 5000; Cessna Citation X; Dassault Falcon 900EX/C.		
		digital AHRS or IRS	combined		varies by installation	varies by version			
	<b>Primus Epic CDS</b>	micro DADC	FZ-800	28 VDC	varies by installation	varies by installation	Digital fail-passive system. CAT II-capable, ARINC 429 interfaces. Two-, three-, four- or five-tube 10 in. x 8 in. EFIS. SyberJet SJ30-2.		
		digital AHRS or IRS	combined		varies by installation	varies by installation			
	<b>Primus Epic</b>	air data module and micro IRS	integrated modular avionics unit	28 VDC	varies by installation	varies by installation	Integrates all traditional avionics into modular avionics unit. Digital, dual-channel; fail operational system. CAT II-capable w/ optional auto-throttle and envelope protection. Includes two- to five-tube 10 in. x 8 in. LCD EFIS or four 13 in. LCDs. Agusta/Bell AB139; Citation Sovereign; Dassault Falcon 900EX, 2000EX and 7X; Embraer 170, 175, 190 and 195; Gulfstream G350, G450, G500 and G550; Hawker 4000.		
		air data module and micro IRS			varies by installation	varies by installation			
<b>Rockwell Collins</b> 400 Collins Rd. N.E. Cedar Rapids, IA 52498 (319) 295-4085 <a href="http://www.rockwellcollins.com">www.rockwellcollins.com</a>	<b>APS 4000</b>	ADC-3000/3010 AHC-3000/4000	integrated	28 VDC	varies by installation	varies by installation	Available only as part of integrated Pro Line 21 system. Built-in diagnostics, dual channel, fail-passive, digital CAT-II certificated autopilot and flight director.		
		—	—		varies by installation	see remarks			
	<b>APS-65</b>	AHC-3000	APS-65	28 VDC	varies by installation	varies by installation	Built-in diagnostics; digital Cat II certificated autopilot. Optional EFIS and AHRS. STC kit installer fabricated. Compatible with EFIS-84. *Typical configuration, \$155,976.		
		remote vertical gyro or dual AHRS	EFIS-84 (two tube)		50.6	*			
	<b>APS-85</b>	ADS-86	APS-85	28 VDC, 115 VAC, 400 Hz	varies by installation	varies by installation	Available only as full, dual-channel, fail-passive, digital system; digital Cat II autopilot, 4- or 5-tube EFIS optional; ARINC 429 IRS interface available; includes yaw damper; extensive built-in diagnostics. STC kit installer fabricated. Compatible with EFIS-84. *Typical configuration, \$290,388.		
		dual AHRS AHC-3000	EFIS-85 (three tube)		varies by installation	*			

## COLLISION AVOIDANCE SYSTEMS

Manufacturer	Model	Display Interface Options	Processor Size	Price	Remarks
	TSO		Weight (lb.)		
<b>ACSS an L-3 Communications &amp; Thales Company</b> 19810 N. 7th Ave. Phoenix, AZ 85023 (623) 445-7000 Fax: (623) 445-7001 <a href="http://www.acss.com">www.acss.com</a>	<b>TAWS+</b>	MFD, EFIS, weather wadar wisplay	2 MCU	\$153,849 (with GPS)	Terrain Advisory Line and Avoid Terrain features. With GPS version alerts based on aircraft climb capability.
	C151B Class A, C129b2		—	\$136,644 (without GPS)	
	<b>TCAS 2000 RT-950/951</b>	MDFD, EFIS, VSI/TCAS display	4 MCU - 14.7 6 MCU - 15.8	\$203,752	Change 7.1 compliant. Standard positions on many regional and business jets. Bombardier, Cessna, Dassault, Embraer, Gulfstream, Hawker Beechcraft. (SFE selectable on all Airbus and Boeing aircraft.)
	C119b		—		
	<b>TCAS 3000SP</b>	MFD, EFIS, weather radar display	4 MCU - 13.85 6 MCU - 16.08	\$223,327	Change 7.1 compliant. Flexible to add certified ADS-B in applications combined with TCAS.
	—		—		
	<b>T<sup>2</sup>CAS</b>	MFD, EFIS, weather radar display, VSI/TCAS display	6 MCU - 15.8	\$295,401	Combined TCAS and TAWS in one box. Change 7.1 compliant. ADS-B In/Out capable. Certified on Airbus A320 family.
	C119b, C151b Class A, C129b2		—		
<b>Avidyne Corp.</b> 55 Old Bedford Rd. Lincoln, MA 01773 (800) 284-3963 Fax: (614) 885-8307 <a href="http://www.avidyne.com">www.avidyne.com</a>	<b>TAS600</b>	MFD, EFIS, weather displays, GPS map displays	7.25 x 11.67 x 3.10	\$8,495	Detects and interrogates other aircraft transponders within range, displaying the surrounding traffic on a host of compatible display systems and provides audible and visual alerts in the event of a potential traffic conflict. Provides 30-second decision time at a closure rate of up to 1,200 kt. Head-Up Audible Position Alerting verbally indicates the conflicting aircraft's bearing, range and relative altitude for rapid visual acquisition of traffic. Includes Patented directional top and bottom antennas. Recommended for entry-level, single-engine piston aircraft. Features a 7-nm range, 3,500 ft. vertical separation maximum and 18,500-ft. service ceiling.
	C-147		8.71 (includes processor, dual antennas and coupler)		
	<b>TAS605</b>	MFD, EFIS, weather displays, GPS map displays	7.25 x 11.67 x 3.10	\$10,495	Recommended for mid=performance aircraft and helicopters. Features 13-nm range, 5,500-ft. vertical separation maximum and a 55,000-ft. service ceiling. It accepts ARINC 429 heading input, permitting rapid repositioning of targets during high-rate turns.
	C-147		8.71 (includes processor, dual antennas and coupler)		
	<b>TAS615</b>	MFD, EFIS, weather displays, GPS map displays	7.25 x 11.67 x 3.10	\$8,495	Recommended for high-performance aircraft and helicopters, the TAS615 features 17-m range, 10,000-ft. vertical separation maximum and 55,000-ft. service ceiling. It accepts ARINC 429 heading, permitting rapid repositions of targets during high-rate turns.
	C-147		8.71 (includes processor, dual antennas and coupler)		
	<b>TAS620</b>	MFD, EFIS, weather displays, GPS map displays	7.25 x 11.67 x 3.10	\$20,990	Features 21-nm range, a 10,000-ft. vertical separation maximum and a 55,000-ft. service ceiling. Accepts ARINC 429 heading inut, permitting rapid repositioning of targets during high-rate turns.
	C-147		8.71 (includes processor, dual antennas and coupler)		

## COLLISION AVOIDANCE SYSTEMS

Manufacturer	Model	Display Interface Options	Processor Size	Price	Remarks
	TSO		Weight (lb.)		
<b>Garmin</b> 1200 E. 151st. St. Olathe, KS 66062 (800)800-1020 (800)357-8200 Fax: (913) 397-8282 <a href="http://www.garmin.com">www.garmin.com</a>	<b>HTAWS</b>	GNS 530 (W) series; SNS 430 (W) series	—	\$9,995	Options feature for GNS 530/430 (W) Flight Management Systems for helicopters. Visual and aural warnings are provided to warn crew of potential CFIT hazards. Reduced Protection Mode (RP MMode) is available. Provides optional voice callouts (VCOs) when descending 500 feet and lower. Option available for remote mountable annunciation.
	C194		—		
	<b>GTS 800</b>	GNS 530 (W), GNS 500 (W), GNA 400 (W), GNS 420 (W), GNS 430 (W), G1000 Series, G900X Series, G600, G500 and select non-Garmin displays	6.25 x 2.7 x 12.7	\$9,995	40-watt TAS suited to most light helicopters and piston aircraft. Features GARMIN's exclusive CLEAR CAS technology with up to 12 miles of active surveillance and ADS-B "in" capability.
	C147, C166a, DO-197A, DO-200A		LRU 9.0 vertical rack, 1.05; horizontal rack 1.94		
	<b>TAWS</b>	G1000 G900X GNS 530 (W) GPS 500 (W)	N/A	\$10,000	GNS 500 Series navigation systems. Visual and aural warnings are provided to warn crew of potential CFIT hazards.
	C151a Class B		N/A		
	<b>GTS 820</b>	GNS 530 (W), GNS 500 (W), GNA 400 (W), GNS 420 (W), GNS 430 (W), G1000 Series, G900X Series, G600, G500 and select non-Garmin displays	6.25 x 2.7 x 12.7	\$19,995	TAS traffic alerting for faster and higher-performing aircraft. Combines active/active surveillance, 250-watt output (for up to 40 mi. of active surveillance), and Garmin CLEAR CAS with ADS-B "in" capability.
	C147, C166a, DO-197A, DO-200A		LRU: 9.0 vertical rack 1.05 horizontal rack 1.94		
	<b>GTS 850</b>	GNS 530 (W), GNS 500 (W), GNA 400 (W), GNS 420 (W), GNS 430 (W), G1000 Series, G900X Series, G600, G500 and select non-Garmin displays	6.25 x 2.7 x 12.7	\$24,995	Satisfies all TCAS I collision avoidance criteria for higher-capacity turboprops and jets. Garmin CLEAR CAS enables both active and passive surveillance with 1090 MHz ADS-B "in" capability; 250 watts output.
	C118, C116a, DO-197A, DO-267A		vertical rack 1.05 horizontal rack 1.94		
<b>Honeywell Aerospace</b> Bendix/King Avionics 9201 San Mateo Blvd. NE Albuquerque, NM 87113 <a href="http://www.bendixking.com">www.bendixking.com</a>	<b>Bendix/King KGP 560</b>	KMD 550 MFD, KMD 850 MFD and most MFDs	2.2 x 4.15 x 6.25	\$12,865	EGPWS exceeds Class B requirements. Provides aural and visual warnings; Internal GPS; worldwide database by region.
	C151 Class B		1.5		
	<b>KGP 860</b>	KMD 550 MFD, KMD 850 MFD and most MFDs	2.2 x 4.15 x 6.25	\$15,615	EGPWS exceeds Class B requirements. Provides aural and visual warnings; internal GPS; worldwide database by region. EFIS displays additional warning modes.
	C151 Class B		1.5		
	<b>Mark XXI</b>	KMD 550 MFD, KMD 850 MFD and most MFDs	4.5 x 7.0 x N/A	\$19,011	Helicopter EGPWS.
	C118 Class B		1.5		
	<b>Bendix/King KTA 870</b>	KMD 550 MFD, KMD 850 MFD and most MFDs	4.5 x 7.0 x 13.8	\$27,982	Traffic Advisory System (TAS) is an active system providing aural and visual advisories. Single or dual directional antennas.
	C147		8.75		
	<b>KTA 970</b>	dual-color, flat-panel LCD combined IVSI/TA display, KMD 550, EFIS, KMD 850 or weather radar	4.5 x 7.0 x 13.8	\$36,767	TCAS I system.
	C118		8.75		
	<b>Bendix/King KMH 880</b>	KMD 550 MFD, KMD 850 MFD and most MFDs	4.5 x 7.0 x 13.8	\$43,730	Traffic Advisory System (TAS) and EGPWS in one box. Active traffic system providing aural and visual advisories. Single or dual directional antennas.
	C147, C151, Class B		8.75		
	<b>Bendix/King KMH 980</b>	KMD 550 MFD, KMD 850 MFD and most MFDs	4.5 x 7.0 x 13.8	\$56,723	TCAS I and GA-EGPWS.
	C118, C151 Class B		9.68		

## COLLISION AVOIDANCE SYSTEMS

Manufacturer	Model TSO	Display Interface Options	Processor Size	Price	Remarks
			Weight (lb)		
<b>L-3 Avionics Systems</b> 5353 52nd St. S.W. Grand Rapids, MI 49512 (616) 949-6600 Fax: (616) 285-4224 <a href="http://www.L-3avionics.com">www.L-3avionics.com</a>	<b>LandMark TAWS 8000</b>	TAWS compatible Arinc 453 EFIS, Arinc 453 weather radar indicators and compatible MFDs. Display on non-Arinic 453 radar indicators requires the RGC 350 Radar Graphics Computer (sold separately)	7.0 x 2.25 x 9.0	\$12,230	Remote processor that offers predictive warning functions using position data from a GPS receiver, flight configuration and an internal terrain and obstacle database. Both aural and visual warnings are issued whenever CFIT situations arise. LandMark is designed to meet or exceed Class B requirements of TSO C151a. Baro-corrected altitude input required.
	C151a Class B		3.35		
	<b>LandMark TAWS 8100</b>	TAWS compatible Arinc 453 EFIS, Arinc 453 weather radar indicators and compatible MFDs. Display on non-Arinic 453 radar indicators requires the RGC 350 Radar Graphics Computer (sold separately)	7.0 x 2.25 x 9.0	\$15,230	Features a WAAS GPS Sensor. With its accurate positioning information, the LandMark 8100 eliminates the need for multiple inputs from other aircraft sensors, simplifying the installation. The 8100 provides the highest integrity terrain data without complicated GPS, ADC or OAT inputs. 320 nm range.
	C151b Class B		3.40		
	<b>SkyWatch SKY497</b>	Displays on compatible EFIS and MFDs. Contact factory for list.	12.52 x 3.56 x 7.62	\$15,990	(TAS) Active surveillance 11 nm, tracks up to 30 intruder aircraft and provides both aural and visual warnings. Verbal Intruder Positioning (VIP) announces range, bearing and relative altitude or intruder aircraft through cockpit's audio system. Single antenna system reduces installation costs and exceeds the performance of dual antenna systems. 5-yr. warranty.
	C147		LRU: 8.9 Antenna: 2.3		
	<b>SkyWatch HP SKY899</b>	Displays on compatible EFIS and MFDs. Contact factory for list.	12.52 x 3.56 x 7.62	\$20,990	(TCAS-I) Active surveillance 35 nm, tracks up to 35 intruder aircraft and provides both aural and visual warnings. Verbal Intruder Positioning (VIP) announces range, bearing and relative altitude or intruder aircraft through cockpit's audio system. Single antenna system reduces installation costs and exceeds the performance of dual antenna systems. 5-yr. warranty.
	C147		LRU: 9.0 Antenna: 2.3		
	<b>SkyWatch HP SKY899</b>	Displays on compatible EFIS and MFDs. Contact factory for list.	12.52 x 3.56 x 7.62	\$24,340	(TCAS-I) Active surveillance 35 nm, tracks up to 35 intruder aircraft and provides both aural and visual warnings. Verbal Intruder Positioning (VIP) announces range, bearing and relative altitude or intruder aircraft through cockpit's audio system. Single antenna system reduces installation costs and exceeds the performance of dual antenna systems. 5-yr. warranty.
	C147, C118		LRU: 9.0 Antenna: 2.3		

## COLLISION AVOIDANCE SYSTEMS

Manufacturer	Model	Display Interface Options	Processor Size	Price	Remarks
	TSO		Weight (lb)		
<b>Honeywell Aerospace</b> 1944 East Sky Harbor Circle Phoenix, AZ 85034 (800) 601-3099 Fax: (602) 365-3343 <a href="http://www.honeywell.com">www.honeywell.com</a>	<b>EGPWS MK VI</b>	EFIS (select), MFD and radar indicators	6.2 x 3.0 x 12.1	\$46,611	MK VI designed for 10- to 19-passenger turboprop operation, interface and display requirements.
	C151b Class A, C92C		3.5		
	<b>EGPWS MK VIII</b>	EFIS (select), MFD and radar indicators	6.2 x 3.0 x 12.1	\$56,054	MK VIII designed for >30-passenger light transport operations, small turbofan, business jets. No internal GPS
	C151b Class A, C92C		3.5		
	<b>EGPWS MK XXII</b>	EFIS and MFDs	6.2 x 3.0 x 12.1	\$61,513	MK XXII is for helicopters with radar altimeters. Low-altitude mode. Internal GPS.
	C151b Class A		3.5		
	<b>EGPWS MK V</b>	EFIS, MFD and radar indicators	7.9 x 2.4 x 12.8	\$115,854 (without internal GPS)	MK V is standard equipment on turbofan aircraft with digital avionics.
	C151b Class A, C92c, C117a		7.5		
	<b>EGPWS MK VII</b>	EFIS, MFD and radar indicators	7.9 x 2.4 x 12.8	\$116,222	MK VII is for turbofan aircraft equipped with analog avionics.
	C151a Class A, C92c, C117a		8.0		
<b>Rockwell Collins</b> 400 Collins Rd. N.E. Cedar Rapids, IA 52498 (319) 295-1000 Fax: (319) 295-2297 <a href="http://www.rockwellcollins.com">www.rockwellcollins.com</a>	<b>CAS 66A System</b>	dual-color, flat-panel LCD combined IVSI/TA display, KTA 870, KMH 880, EFIS or weather radar	½ ATR-S (4 MCU)	\$136,934	TCAS I system. Includes processor, control panel, directional antenna and IVSI/TA display. Does not include installation kits. Upgradable to TCAS II.
	C118		17.0		
	<b>CAS 67A System</b>	dual-color, flat-panel LCD combined IVSI/TA/RA display (included in price shown). Also can interface with KMD 550 MFD, KMD 850 MFD, EFIS or weather radar	1/2 ATR-S (4 MCU)	\$269,211	TCAS II system includes one TTR-4000 TCAS II LRU, one TRE-920 directional antenna, one TVI-920 VSI (TA/RA) display and one CTL-92T TCAS control panel. Does not include: Mode S transponder(s), installation kits/trays or bottom omni-directional TCAS antenna. Software upgradeable to Change 7.1.
	C119 a/b				
	<b>TCAS 4000</b>	Collins EFIS, MFD TCAS compatible VSI (RA) Collins TVI-920 (RA, TA)	4 MCU	\$422,064* (typical installation)	TCAS II system. European ACAS compatible Mode S Level III. AC/DC in one part number includes control panel and two TRE antennas. Displays range/alt. separation from traffic. Max range 3 mi. Two surveillance volumes and MSL of traffic. Top/bottom antennas to optimize coverage. Upgrades to 8800 Gold. *BCA estimate.
	C119 (C119a when issued)		17.0		
<b>Sandel Avionics</b> 2401 Dogwood Way Vista, CA 92081 (877) 726-3357 ((760) 727-4900 Fax: (760) 727-4899 <a href="http://www.sandel.com">www.sandel.com</a>	<b>ST3400H HeliTAWS</b>	Integrated rear projection LCD with LED backlighting	3 ATI panel-mount	\$18,950	3-ATI helicopter TAWS with integrated display. Can replace existing radar altimeter indicator. Sunlight readable LED backlit display with 180 deg. viewing angle and over 10,000-hr. MTBF. NVIS compatible version \$22,200.
	C87, C113, C151b, C194		2.9		
	<b>ST3400 TAWS</b>	Integrated rear projection LCD with LED backlighting	3 ATI panel-mount	\$22,750	3-ATI Class A or Class B TAWS with integrated display. Sunlight readable LED backlit display with 180 deg. viewing angle and over 10,000 hr. MTBF. Optional interface for traffic, \$980. Class A version, \$37,100.
	C113, C151b		2.9		
<b>Universal Avionics Systems Corp.</b> 3260 E. Universal Way Tucson, AZ 85756 (520) 295-2300 (800) 321-5253 Fax: (520) 295-2395 <a href="http://www.uasc.com">www.uasc.com</a>	<b>TAWS A TAWS B</b>	Universal Avionics EFI-890R, MFD-640, UNS FMS (5-in. display) Honeywell numerous weather radar, MFD and EFIS displays Rockwell Collins numerous weather radar, MFD and EFIS displays Smiths BAE ATP EFIS additional display options available	2 MCU LRU	TAWS A \$40,700 TAWS B \$26,200	Worldwide terrain database with 480+ MB data. High-resolution analog video views; 3-D perspective view; profile view; map view. Map view of terrain can be output using ARINC 708 or WXPF formats for interface with various existing weather radars. Both version include obstacle database.
	C151b, C92c		9.6		

## COCKPIT VOICE RECORDERS (CVR)/FLIGHT DATA RECORDERS (FDR)

Manufacturer	Type	Recording Medium	Size	Price	Remarks	
	Model					
	TSO	Duration	Weight (lb.)	Power Required		
<b>Honeywell Aerospace</b> 1944 East Sky Harbor Circle Phoenix, AZ 85034 (800) 601-3099 Fax: (602) 365-3343 <a href="http://www.honeywell.com">www.honeywell.com</a>	CVR	solid-state, digital	9.5 x 5.88 x 5.75	\$29,539	Non-ARINC size with underwater locator beacon; control panel and mounting tray not required. ARINC 557 and ARINC 757.	
	<b>AR 120 CVR 980-6023-002</b>					
	ED 56A, C123a	120 min.	8.8	28 VDC		
	CVR	solid-state, digital	½ ATR Short	\$41,801	Solid-state CVR with underwater locator beacon. ARINC 557 and ARINC 757.	
	<b>SSCVR 980-6022-011</b>					
	ED 56A, C123	120 min.	11.5	28 VDC 115 AC		
	FDR	solid-state, digital	9.5 x 5.88 x 5.75	\$43,471	Non-ARINC FDR, ARINC 717, 429. Mounting tray not required.	
	<b>AR FDR 980-4710-00X</b>					
	ED 55, C124e	25 hrs. @ 64, 128, 256 wps	8.8	28 VDC		
	FDR	solid-state, digital	½ ATR Long or Short	\$32,785 to \$45,535	Solid-state FDR; ARINC Form Factor; underwater locator beacon. ARINC 747, 573, 717. Fire test to ED 56a.	
	<b>SSFDR 980-4700-0XX</b>					
	ED 55, C124	25 hrs. @ 64, 128, 256 wps	11.5 (Short) 13.5 (Long)	115 VAC 28 VDC		
<b>L-3 Aviation Recorders</b> 100 Cattlemen Rd. Sarasota, FL 34232 (941) 371-0811 <a href="http://www.L-3ar.com">www.L-3ar.com</a>	<b>CVR/FDR</b>	<b>FA2100</b>	solid-state	1½ ATR Short CVR; 1/2 ATR Short or Long FDR CVR/FDR Short: 12.6 x 5.0 x 5.5 FDR Long: 19.6 x 5.0 x 5.5	\$21,030, CVR \$23,705, FDR	Includes underwater locator beacon, mounting tray required. ARINC 757 connector CVR, ARINC 747 connector FDR, GMT or FSK time-signaling source for CVR. Separate RIPS module available for CVR, rotor-speed input for CVR for helicopter applications; CPDLC data link recording for CVR; minimum 25-hr. 64 wps up to 1024 wps recording rate for FDR; ramp (portable) and shop (bench) GSE hardware and software diagnostics and readout tools optional.
	<b>FA2100</b>					
	C123b, C124b, EUROCAE ED-112					
	<b>CVDR</b>	<b>FA2100</b>	solid-state	½ ATR Short 12.6 x 5.0 x 5.5	\$23,446	Includes underwater locator beacon, mounting tray required. ARINC 757 connector, GMT or FSK time-signaling source for CVR. Separate RIPS module available for CVR, rotor-speed input for CVR for helicopter applications; CPDLC data link recording for CVR, OMS output for CVR, minimum 2-hr. 4-channel high-quality audio recording for CVR, minimum 25-hr., 128 wps up to 1024 wps recording rate for FDR; ramp (portable) and shop (bench) GSE hardware and software diagnostics and readout tools available.
	<b>FA2100</b>					
	C123b, C124b, EUROCAE ED-112					
	<b>CVR/FDR</b>	<b>FA5000</b>	solid-state	½ ATR Short 12.6 x 4.8 x 6.5	\$37,356	Includes underwater locator beacon, mounting tray required. MIL-C-38999 connector, GMT or FSK time-signaling source for CVR. Separate RIPS module available for CVR, rotor-speed input for CVR for helicopter applications; CPDLC data link recording for CVR, OMS output for CVR, minimum 2-hr. 4-channel high-quality audio recording for CVR, minimum 25-hr., 128 wps up to 1024 wps recording rate for FDR; ramp (portable) and shop (bench) GSE hardware and software diagnostics and readout tools available. Ethernet data output.
	<b>CVDR Model FA5000</b>					
	C123b — CVR C124b — FDR EUROCAE ED-112 — CVR and FDR					
	<b>CVDR/SRIVR</b>	—	solid-state	6.55 x 5.55 x 3.25	\$24,266	Same as above
	—					
	C123b, C124b EUROCAE Ed-112					

## COCKPIT VOICE RECORDERS (CVR)/FLIGHT DATA RECORDERS (FDR)

Manufacturer	Type	Recording Medium	Size	Price	Remarks	
	Model	Duration	Weight (lb.)	Power Required		
	TSO					
<b>L-3 Aviation Recorders</b> 100 Cattlemen Rd. Sarasota, FL 34232 (941) 371-0811 <a href="http://www.L-3ar.com">www.L-3ar.com</a> —	<b>MADRAS*</b>	solid-state	½ ATR Short 12.6 x 5.0 x 7.6	\$80,913	Includes underwater locator beacon, mounting tray required. ARINC 404 Quad connector, GMT time-signaling source for CVR, rotor-speed input for CVR for helicopters applications; minimum 2-hr. 4-channel recording for CVR; minimum 25-hr., 64 wps up to 512 wps recording rate for FDR. Data acquisition options include analog, discrete, synchro, frequency, ARINC 429 and custom signal inputs tailored to each aircraft model. Ramp (portable) and shop (bench) GSE hardware and software diagnostics and readout tools available. *Modular Airborne Data Recording & Acquisition System.	
	<b>FA2300 combi voice, data &amp; data acquisition recorder</b>		2-hr. FDR 25-hr. FDR custom data acquisition inputs			
	C123b, C124b, EUROCAE ED-112		15.0	28 VDC		
	<b>Lightweight Data Recorder</b>	solid-state	8.0 x 3.9 x 4.9	\$13,348	No mounting tray required; 2-hr. 2-channel voice recording; 25-hr. GPS data recording; 5-hr. ARINC 717 data recording; 2-hr. analog video recording at 5 fps. Ethernet data output.	
	<b>LDR</b>	2 hr. CVR 25 hr. FDR 2-hr. video	5.0	28 VDC		
	C197, EUROCAE ED-155					
	<b>Micro Quick Access Recorder</b>	Minimum 2 GB compact flash memory	2.7 x 2.2 x 1.8	\$5,513	ARINC 573/717/747 compatible; data rates 64 wps up to 1024 wps; USB or Ethernet data output. Fixed or removable flash card media. Data download software utility optional.	
	—	—	6 oz.	115 VAC 400 Hz or 28 VDC		
	—					
<b>Universal Avionics Systems Corp.</b> 3260 E. Universal Way Tucson, AZ 85756 (520) 295-2300 Fax: (520) 295-2395 <a href="http://www.uasc.com">www.uasc.com</a>	<b>Combi CVR/FDR</b>	solid-state flash memory	6.0 x 4.9 x 8.0	\$19,500	No internal batteries. No periodic maintenance. Four channels of cockpit audio data, UTC from ARINC 429 bus, UTC from a Frequency Shift Keying (FSK) signaling source, Rotor Speed for helicopter application. ARINC 717 Flight Data Recording, analog/digital sensor signals via FDAU, ARINC 758 data link information. PC-based ramp testing/diagonstics.	
	<b>CVFDR-145</b>		7.0			
	C123b, C124b, C177, C123a, C124a, EUROCAE ED-112	120-min. voice & ambient audio +25 hr. (min.) Flight data +120 minute data link messaging	28 VDC			
	<b>Combi CVR/FDR w/ embedded Redundant Independent Power Supply (RIPS)</b>	solid-state flash memory	6.0 x 4.9 x 8.0	\$27,500	Embedded RIPS. Solid state memory. No internal batteries. No periodic maintenance. Four channels of cockpit audio data, UTC from ARINC 429 bus, UTC from a Frequency Shift Keying (FSK) signaling source, Rotor Speed for helicopter application. ARINC 717 Flight Data Recording, analog/digital sensor signals via FDAU, ARINC 758 data link information. PC-based ramp testing/diagonstics.	
	<b>CVFDR-145R</b>		8.68			
	C123b, C124b, C155, C177, C123a, C124a, EUROCAE ED-112	120-min. voice & ambient audio +25 hr. (min.) Flight data +120 minute data link messaging	28 VDC			
	<b>CVR</b>	solid-state flash memory	6.0 x 4.9 x 8.0	\$16,500	No internal batteries. No periodic maintenance. Four channels of cockpit audio data, UTC from ARINC 429 bus, UTC from a Frequency Shift Keying (FSK) signaling source, rotor Speed for helicopter applications, ARINC 758 data link information. PC-based ramp testing/diagonstics.	
	<b>CVR-120A</b>		7.9			
	C123b, C177, C123a, EUROCAE ED-112	120-min. voice & ambient audio	28 VDC			
	<b>CVR w/embedded Recorded Independent Power Supply (RIPS)</b>	solid-state flash memory	6.0 x 4.9 x 8.0	\$24,500	Embedded RIPS. Solid-state memory. No internal batteries. No periodic maintenance. Four channels of cockpit audio data, UTC from ARINC 429 bus, UTC from a Frequency Shift Keying (FSK) signaling source, rotor speed for helicopter applications. ARINC 758 data link information. PC-based ramp testing/diagonistics.	
	<b>CVR-120R</b>		8.68			
	C123b, C155, C177, C123a, EUROCAE ED-112	120 min. voice & ambient audio	28 VDC			
	<b>FDR</b>	solid-state flash memory	6.0 x 4.9 x 8.0	\$16,500	No internal batteries. No periodic maintenance. ARINC 717 Flight Data Recording. Additional data storage beyond 25 hr., analog/digital sensor signals via FDAU. PC-based ramp testing/diagonstics.	
	<b>FDR-25</b>		7.9			
	C124b, C124a, EUROCAE ED-112	25 hr. (min) Flight data + 120 min. data link messaging	28 VDC			

## HEAD-UP DISPLAYS

Manufacturer	Model	Inputs & Outputs	Units/Weight (lb.)	Price	Remarks
			Size or Form Factor	Power Required	
<b>Elbit Systems of America-Commercial Aviation Kollsman</b> 220 Daniel Webster Hwy. Merrimack, NH 03054 (603) 889-2500 <a href="http://www.kollsman.com">www.kollsman.com</a>	Advanced Technology HUD (AT-HUD)	ARINC 429, ARINC 615 discrete, Enhanced Vision (EVS) video, Synthetic Vision (SVS) video	33 14.0 x 6.0 x 5.0	\$356,000* 28 VDC	Fully digital EFVS video ready LCD HUD that is compact and lightweight. *Contact manufacturer for specific pricing.
<b>Rockwell Collins (Head Up Guidance Systems)</b> 16600 S.W. 72nd Ave. Portland, OR 97224 (503) 443-3050 <a href="http://www.rockwellcollins.com">www.rockwellcollins.com</a>	<b>HGS-4000</b>	ARINC 429, various discrete, enhanced vision, synthetic vision	48.0 - 55.0	\$397,481*	Developed for the Boeing b737, Bombardier CRJ and Q400. *BCA estimate.
			3 LRUs	NA	
	<b>HGS-3500</b>	ARINC 429, various discrete, enhanced vision, synthetic vision	varies by configuration/less than 15 lb. 3 LRUs	Data unavailable	Developed for light to midsize business aircraft applications. Features vary by aircraft, but may include Dual-HUD for pilot/copilot operations; EVS displayed head-up; SVS displayed head-up; Cat III landing capability; low-visibility takeoff capability; lower Cat I minima RVR 1,500 ft. (450 meters); constant view of aircraft flight path and energy state; precise speed and acceleration control; unusual attitude recovery display; TCAS resolution advisory display; wind shear recovery display; runway remaining and deceleration cues; military mission-specific symbology available; flare guidance during all approaches.
	<b>HGS-5000</b>	ARINC 429, various discrete, enhanced vision, synthetic vision	48.0 - 53.0 3 LRUs	Data unavailable	Developed for Embraer jets, Dassault Falcon 7X
	<b>HGS-6000</b>	ARINC 429, various discrete, enhanced vision, synthetic vision	40.0 - 46.0 3 LRUs	Data unavailable	Developed for Gulfstreams, Bombardier Global and Challenger aircraft

## AIRCRAFT SITUATION DISPLAYS

Manufacturer	Model	Display	Inputs	Outputs	Units/Weight (lb.)	Price	Remarks
	TSO	Display Size			Size or Form Factor	Power Required	
<b>Aspen Avionics</b> 5001 Indian School Rd. NE Albuquerque, NM 87110 (505) 856-5034 Fax: (505) 314-5440 <a href="http://www.aspenavionics.com">www.aspenavionics.com</a>	<b>1000 MFD</b>	TFT AMLCD (400 x 760)	ARINC 429 (5) RS-232 (5)	ARINC 429 (1) RS-232 (3)	display: 2.6 lb w/mounting bracket remote sensor: 0.2 lb	\$5,995*	Includes integral ADAHRS backup battery and emergency GPS, integral altitude alterter/preselect, GPS flight plan map views: 360° and arc, slaved directional gyro with heading bug. *BCA estimate.
	C2d, C3d, C4c, C6d, C8d, C10b, C106, C113	6.0-in diag.	Pitot/static quick connect		display: 3.50 x 7.0 x 4.15 depth: 6.35 in. remote sensor: 2.65 x 4.40 x 1.0 in.	14-28 VDC (provided by PDF)	
	<b>1000C3 Pro</b>	TFT AMLCD (400 x 760)	ARINC 429 (5) RS-232 (5)	ARINC 429 (1) RS-232 (3)	display: 2.6 lb w/mounting bracket remote sensor: 0.2 lb	\$9,995*	Same as EFD 1000, plus full EHSI with dual bearing pointers; dual GPS, dual VHF nav support; autopilot and flight director integration; integral GPS steering; base map with curved flight paths; (optional) traffic, weather overlays. EFD PRO HPFD for helicopters, \$14,995. *BCA estimate.
	C2d, C3d, C4c, C6d, C8d, C10b, C106, C113	6.0-in. diag.	Pitot/static quick connect		display: 3.50 x 7.0 x 4.15 depth: 6.35 in. remote sensor: 2.65 x 4.40 x 1.0 in.	14-28 VDC (provided by PDF)	
<b>Avidyne Corp.</b> 55 Old Bedford Rd. Lincoln, MA 01773 (800) 284-3963 Fax: (614) 885-8307 <a href="http://www.avidyne.com">www.avidyne.com</a>	<b>MHD 300</b>	AMLCD	RS-232 ARINC 429	ARINC 429	2.0/0.9 kg	\$7,990* \$10,990 with NVG	Interface applications with Avidyne TAS600-Series, Stormscope WX-500, Honeywell Class B TAWS (EGPWS), TCAS I, NVG compatible, DME. *BCA estimate.
	C147, C118	3 ATI	ARINC 568 (DME)		3.26 x 3.26 x 8.5	10-30 VDC	
<b>Cobham (Chelton Flight Systems)</b> 1111 West Jefferson Ste. 500 Boise, ID 83702 (208) 389-9959 <a href="http://www.cheltonflightsystems.com">www.cheltonflightsystems.com</a>	<b>EFIS</b>	LCD	ARINC 429, Stormscope WX-500, TCAS, TCAD, ARINC, RMI, ADF, FMS, OAT, VS, GS deviation, landing gear, DH, GPS, RS-232	display, annunciators and aural warnings	—	\$70,000* one screen including all sensors	TAWS moving map display, WSI wx, terrain with waterways, TCAS I/II, lightning, Jeppesen NavData, FAA NACO obstructions available by subscription. DO-178B 6.0 software TSOed. *BCA estimate.
	C113, C110a, C151b, C92c	6.4-in. diag.			5.5 x 6.25 x 4.5	11-33 VDC	
<b>Garmin</b> 1200 E. 151st St. Olathe, KS 66062 (800)800-1020 (800)357-8200 Fax: (913) 397-8282 <a href="http://www.garmin.com">www.garmin.com</a>	<b>HTAWS</b>	(display interface options: GNS 530 (W) series; GNS 430 (W) series	N/A	N/A	see remarks	\$9,995	Options feature for GNS 530/430 (W) Flight Management Systems for helicopters. Visual and aural warnings are provided to warn crew of potential CFIT hazards. Reduced Protection Mode (RP Mode) is available. Additionally provides optional voice callouts (VOCs) when descending 500 feet and lower. Option available for remote mountable annunciation.
	C194					N/A	

## AIRCRAFT SITUATION DISPLAYS

Manufacturer	Model	Display	Inputs	Outputs	Units/Weight (lb.)	Price	Remarks
	TSO	Display Size			Size or Form Factor	Power Required	
<b>Garmin</b> 1200 E. 151st St. Olathe, KS 66062 (800)800-1020 (800)357-8200 Fax: (913) 397-8282 <a href="http://www.garmin.com">www.garmin.com</a>	<b>GTS 800</b>	(display interface options): GNS 530 (W), GNS 500 (W), GNS 400 (W), GNS 420 (W), GNS 430 (W), G1000 Series, G900X Series, G600, G500 and select non-Garmin displays	—	—	LRU: 9.0 vertical rack 1.05; horizontal rack, 1.9	\$9,995	40-watt TAS , suited to most light helicopters and piston aircraft. Features Garmin's exclusive CLEAR CAS technology with up to 12 miles of active surveillance and ADS-B In capability.
		C147, C166a, DO-197A, DO-200A			(processor size) 6.25 x 2.7 x 12.7	N/A	
	<b>G500</b>	—	RS 232, RS 422, RS 485; ARINC 429, ARINC 708; ethernet, ADF (DC Sine/Cos)	RS 232, RS 422, RS 485; ARINC 429, HDG/CRS output, CDI/ VDI flags	1/6.4	\$15,995	"Glass cockpit" suite for Class1/Class2 aircraft (under 8,000 lb.). Replaces standard "six-pack" instruments. Features 6.5-in. PFD and MFD, plus AHRS attitude/heading reference and more. Optional Synthetic Vision Technology (SVT). Optional interface adapter.
		C4c, C6d, C8d, C34e, C36e, C40c, C41d, C52b, C63c, C113, C147, C2d			N/A		
	<b>GTS 820</b>	(display interface options): GNS 530 (W), GNS 500 (W), GNS 400 (W), GNS 420 (W), GNS 430 (W), G1000 Series, G900X Series, G600, G500 and select non-Garmin displays	N/A	N/A	LRU: 9.0 vertical rack 1.05 horizontal rack 1.94	\$19,995	TAS for faster and higher-performing aircraft. Combines active/passive surveillance, 250-watt output (for up to 40 miles of active surveillance), and Garmin CLEAR CAS with ADS-B In capability.
		C147, C166a, CO-197A, DO-200A			(processor size) 6.25 x 2.7 x 12.7	—	
	<b>G500H</b>	10.0 x 6.75 (bezel) x 3.25 (depth)	RS 232, RS 422, RS 485; ARINC 429, ethernet	RS 232, RS 422, RS 485; ARINC 429,	1/6.4	\$24,995	All-glass avionics system designed specifically for the VFR Part 27 helicopter market. Features includes optional helicopter synthetic vision technology (HSVT), helicopter specific databases with over 7,000 heliports and nearly 30,000 additional low-altitude obstacles, optional XM WX Satellite Weather with NEXRAD, and the ability to display video from a FLIR camera or other video sources. (camera not included)
		C4c, C6d, C8d, C34e, C36e, C40c, C41d, C52b, C63c, C113, C147, C2d			N/A		
	<b>GTS 850</b>	(display interface options): GNS 530 (W), GNS 500 (W), GNS 400 (W), GNS 420 (W), GNS 430 (W), G1000 Series, G900X Series, G600, G500 and select non-Garmin displays	N/A	N/A	LRU: 9.0 vertical rack 1.05 horizontal rack 1.94	\$24,995	Satisfies all TCAS I collision avoidance criteria for high-capability turboprops and jets. Garmin CLEAR CAS enables both active and passiv surveillance with 1090 MHz ADS-B "in" capability. 250 watts output.
		C118, C116a, DO-197A, DO-267A			(processor size) 6.25 x 2.7 x 12.7	10-40 VDC	

## AIRCRAFT SITUATION DISPLAYS

Manufacturer	Model	Display	Inputs	Outputs	Units/Weight (lb.)	Price	Remarks
	TSO	Display Size			Size or Form Factor	Power Required	
<b>Honeywell Aerospace Bendix/King Avionics</b> 9201 San Mateo Blvd. NE Albuquerque, NM 87113 (855) 250-7027 <a href="http://www.bendixking.com">www.bendixking.com</a>	KDR 610 XM Weather Receiver	see remarks	weather displays via XM satellite	interfaced to Bendix/King KMD 250, KMD 550 and KMD 850 MFDs	1/1.5	\$7,408	Part of an MFD system; data link weather receiver provides high-speed textual and graphical weather to the cockpit. Available weather products include composite NEXRAD radar, graphical METARs, AIRMETS and SIGMETs. The active flight plan can be overlaid on all graphical weather images. System enables user to pan, zoom and interrogate areas of interest via joystick.
	C157	see remarks			see remarks	10-32 VDC	
	Honeywell MFRD	LCD	RS-232 ARINC 429, radar, datalink, EGPWS, traffic, NTSC video	display	1/7.5	\$52,327 28 VDC or 115 VAC 400 Hz	Multi-function display of weather radar, traffic, terrain, navigation maps, checklists.
	C63c, C110a, C113, C196	6 in. diag.			6.24 (w) x 4.82 (h) x 8.38 (panel depth)		
<b>L-3 Avionics Systems</b> 5353 52nd St. S.W. Grand Rapids, MI 49512 (616) 949-6600 Fax: (616) 285-4224 <a href="http://www.L-3avionics.com">www.L-3avionics.com</a>	Trilogy ESI-1000	AMLCD; optional NVG compatibility	N/A	N/A	1/2.22	\$14,995 14 - 28 VDC	Electronic standby instrument designed to level "A" software and hardware compliances, the Trilogy ESI replaces traditional standby instruments and combines attitude, altitude and airspeed information into a compact 3.8-in. diagonal display while maintaining a 3-ATI chassis design. Heading is available when coupled with the optional magnetometer. For fixed-wing and helicopter applications.
	C2d, C3e, C4c, C6e, C10b, C46a, C113, C179	4.0 x 3.0			3-ATI chassis 4.0 x. 3.35 x 7.66		
	Trilogy ESI-2000	AMLCD; optional NVG compatibility	N/A	N/A	1/2.56	\$15,700 14 - 28 VDC	Electronic standby instrument incorporates an internal battery to meet the requirements for independent, dedicated back-up power for aircraft without dual electrical system. The lithium ion battery is integrated into the ESI-2000 hardware with a triple redundant safety design and provides a minimum of 1 hr. and up to 4 hr. of standby power. Heading is available when coupled with the optional magnetometer. For fixed-wing and helicopter applications.
	C2d, C3e, C4c, C6e, C10b, C46a, C113, C179	4.0 x 3.0.			3-ATI chassis 4.0 x. 3.00 x 6.7		
	GH-3900 ESIS	Active matrix LCD	ARINC 429, RS-232, discrete and analog	ARINC 429, RS-232, discrete and analog	1/ 3.0	\$41,000 Dual 28 VDC inputs (18 VDC emergency power	Features a lighter and shorter chassis than previous models and allows the installer to define multiple I/O interfaces., SSEC and VMO values. An Aircraft configuration PC Software Tool simplifies the setup of the unit, allowing installers to define and customize the presentation of colors, flight cues and navigation data. Designed for FAR Part 25, Part 23 (Class III & IV), Part 27 and Part 29. Variety of air data and heading input options as well as built-in accelerometers. Classified as Non-ITAR.
	C2d, C3e, C4c, C6e, C8e, C10b, C34e, C35d, C36e, C40c, C46a, C66c, C95a, C106, C113, C115b, C145c	3 ATI			8.33 x 3.19 x 3.19 x		
<b>GH-39RSU ESIS</b>	DU-42 Display Active Matrix LCD	DU-42 Display: 3 ARINC 429; 1 USB Serial Bus; 1 RS-232 Serial Bus; 12C Serial Bus; 1 Analog Remote Sensor Unit: 3 ARINC 429; 2 Discrete; 2 Analog	DU-42 Display: 1 ARINC 429 Remote Sensor Unit: 3 ARINC 429; 2 Discrete; 2 Analog	DU-42 Display: 1.5 Remote Sensor Unit: 3.0	Call manufacturer +28 VDC nominal	Features a 4.2-in. diagonal high-resolution display (DU-42) and a separate Remote Sensor Unit (RSU). 1.5-in.-deep display allows installation in aircraft with limited space behind the panel. Configurable I/O interfaces and SSEC and VMO values, as well as display parameters. Designed for FAR Part 25 and Part 23 (Class III & IV aircraft, and Part 27 and Part 29 helicopters.	
	DU-42 Display: C2d, C3e, C4c, C6e, C8e, C10b, C34e, C35d, C36e, C40c, C46a, C66c, C95a, C106, C113a Remote Sensor Unit: C2d, C3e, C4c, C6e, C8e, C10b, C46a, C95a, C106	1.50 (l) x 5.25 (w) x 3.0 (h) null		—			

## AIRCRAFT SITUATION DISPLAYS

Manufacturer	Model	Display	Inputs	Outputs	Units/Weight (lb.)	Price	Remarks
	TSO	Display Size			Size or Form Factor	Power Required	
<b>Rogerson-Kratos</b> 403 S. Raymond Pasadena, CA 91109 (626) 449-3090 <a href="http://www.rogersonkratos.com">www.rogersonkratos.com</a>	<b>5 ATI EFIS</b>	AMLCD flat panel	analog synchro (XYZ, Sin/Cos) variable AC/DC discretes & digital ARINC 429, 419, 453, 735, RS-232	analog synchro (XYZ, Sin/Cos) variable AC/DC discretes & digital ARINC 429, 419, 453, 735, RS-232	1/7.75	\$42,000*	One, two or four programmable, self-contained flat-panel AMLCD EADI and EHSIs. Radio altimeter functions such as DH, expanded scale for landing helicopter operations, TCAS I and II, and EGPs display capability, in addition to standard ADI, HSI, bearing pointers, CDI, autopilot annunciation, flight director cross bars or 'V' bars. Upgrade packages available. *BCA estimate.
	C3d, C4c, C5e, C6d, C8d, C9c, C34e, C35d, C36e, C40c, C41d, C52b, C63c, C66c, C67, C87, C92c, C113, C117a, C118, C119b, C129a, C147, C161a	5 ATI or 6.4-in. diagonal			5 ATI or 6.4 dia.		
<b>Sandel Avionics</b> 2401 Dogwood Way Vista, CA 92081 (877) 726-3357 (760) 727-4900 Fax: (760) 727-4899 <a href="http://www.sandel.com">www.sandel.com</a>	<b>SA4550 Primary Attitude Display</b>	rear projection LCD w/LED backlighting	analog: attitude glideslope, localizer, flight director command inputs, radar altimeter mode annunciators	N/A	1/3.4	\$20,950*	Designed to upgrade legacy ADIs. Incorporates flight director command bars, glideslope/ localizer deviation scale, fast/ slow indicator and mode annunciations. Selectable single-cue/split-cue display option. Sunlight readable LED backlit display with 180-degree viewing angle and over 10,000-hour MTBF. *High-vibration version, \$23,800. NVIS compatible version, \$27,050
	C113, C3d, C4c, C34e, C36e, C52b	4 ATI			4 ATI		
<b>Universal Avionics Systems Corp.</b> 3260 E. Universal Way Tucson, AZ 85756 (520) 295-2300 Fax: (520) 295-2395 <a href="http://www.uasc.com">www.uasc.com</a>	<b>EFI-550</b>	AMLCD; optional NVG compatibility	ARINC 6 - 429/419 1 - 561/568 2 - 453/708A 2 - RS 422 4 - analog 30 - discrete*	ARINC 429/49 (2) RS 422 (2) 6 - analog 8 - discrete	1/7.1	\$14,995	*Depending on configuration.
	C3d, C4e, C5e, C6d, C52b, C105, C113	3.35 x 4.36			(EFIS-85 std.) 4.8 x 5.18 x 7.90 (from front mount surface)		
	<b>EFI-640</b>	AMLCD	ARINC 6 - 429/419 1 - 561/568 2 - 453/708A 2 - RS 422 4 - analog 30 - discrete*	ARINC 429/49 (2) RS 422 (2) 6 - analog 8 - discrete	1/7.8	\$36,000*	Horizontal viewing angles of +/-60°; electronically adjusted vertical viewing angle; sunlight readability with greater than 10,000/1 dimming range. *Depending on configuration.
	C3d, C4c, C5e, C6d, C52b, C105, C113	3.86 x 5.14			5 x 6 ATI 5.18 x 6.18 x 7.9 (from front mount surface)		
	<b>EFI-890R</b>	active matrix color LCD	Analog: 6 - ARINC 429 5 - CSDB 2 - ARINC708 3 - Manchester bus ports 2 - VGA or 1-RDR-1E/F & 1-VGS, 2 - RS-170 or 2 - NTSC comp. or 18:1 1 - RS-232 (maint.) Digital: 28 GND/OPN discrete 14 - 28 VDC/OPN 4 - ARINC 407 with 2 ref. inputs 15 - analog DC	Analog: 2 ARINC 429 2 - CSDB 1 - Manchester bus port Digital: 5 - GND/OPN discrete 3 - 28 VDC/OPN discrete 6 - analog resolvers 2 - DC differential 2 - DC single ended	1/ 12.0 Bezel: 7.84 h x 7.42 w depth: 9.79 (back of bezel to read of connector)	\$60,000*	Horizontal viewing angle +60°-60°, vertical viewing angle +45°-10°; resolution: 780 x 780 pixels; 124.5 color groups per inch (CGPI); sunlight readability with greater than 10,000/1 dimming range. *Depending on configuration.
	C2d, C3d, C4c, C5e, C6d, C8d, C10b, C34e, C35d, C36c, C40c, C41d, C52b, C63c, C66c, C87, C92c, C95, C105, C113, C115b, C118, C119a, C129a, C151a	6.3 c 63 (8.0-om. dia.)					

## ELECTRONIC FLIGHT BAGS

Manufacturer	Model	Display	Inputs	Outputs	Units/Weight (lb)	Price	Remarks
	Class	Display Size			Size	Power Required	
<b>Advanced Data Research Florida</b> 1765 Star Batt Dr. Rochester Hills, MI 48309 (248) 299-5300, Ext. 235 Fax: (248) 299-5319 <a href="http://www.adrsoft.com">www.adrsoft.com</a>	<b>FG 7100 EFB Kit</b>	WXGA transmissive LCD with vertical portrait screen (1280 x 768)	2 USB 2.0, external monitor, PCMCIA card slot, secure Digital (SD) card, modem (RJ-11), ethernet (RJ-45), headphone, mic, docking port	VGA, sound 2 serial (with PCMCIA adapter)	1/2.21	\$3,995	Fujitsu Lifebook P1630 computer with 1.2 GHz Intel Core 2 Duo VLV processor, 1 GB memory (2 GB optional), 80 GB hard drive (120 GB and 64 GB solid-state drive optional); integrated 802.11 a/b/g/Draft N and Bluetooth wireless LAN, PCMCIA and SD drives; Windows XP Tablet Edition, DVD + RW drive and cable, AC adapter, FCS software. Optional TSO'd power supply, plus many other options.
	Class II	8.9-in. diagonal			9.3 x 6.6 x 1.5	16 VCDC	
<b>Esterline CMC Electronics</b> 600 Dr. Frederik Phillips Blvd. Montreal, Quebec, Canada 4HM259 (514) 748-3184 Fax: (514) 748-3100 <a href="http://www.cmcelectronics.ca">www.cmcelectronics.ca</a>	<b>PilotView CMA-1100 (8.4 in.) or CMA-1410 (10.4 in.)</b>	touch-screen XGA AMLCD	ARINC 429 (4) Ethernet USB 2.0 (2) RS 232/422, RS-170/NTSC video discrete I/O (4x1), EDU USB 2.0 (2); PCMCIA wireless 802.11 a/b/g	ARINC 429 (2) Discretes (2) video GPS position	EDU: 3.5 EDU: 4.0 EEMU: 2.0	8.4-in. units: \$25,880 10.4-in. units: \$28,880	Touch-sensitive screen and line select keys with intuitive pilot interface. Applications include: electronic charts (Jeppesen, Lido, EAG, etc.), checklists, performance calculation, e-documents, e-techlog, moving maps and weather. EFB system comprises Electronic Display/Processor Unit (EDU), Enhanced Expansion Module Unit (EEMU).
	Class 2	8.4-in. or 10.4-in. diagonal			EDU: 8.5 x 6.1 x 1.5 EDU: 8.0 x 9.6 x 1.6 EEMU: 1.9 x 6.9 x 5.1	N/A 22-33 VDC or 110/400 Hz	
<b>IMS Flight Deck</b> 16 Technology Dr. Ste. 142 Irvine, CA 92618-2324 (949) 679-9900 <a href="http://www.flightdeck.aero">www.flightdeck.aero</a>	<b>Sky Tab 2350</b>	LCD	1 USB 2.0 port, 1 PCMCIA port, headphone, microphone, 802.11 wireless, Bluetooth	802.11 wireless, Bluetooth	1/1.9	N/A	Microsoft Windows XP Tablet PC OS, 30 GB standard hard drive, optional 8 GB solid state flash drive. No stylus required. AC/DC adapter.
	Class 1	8.4-in. TFT LCD, need direct sunlight readable, 800 x 600 dpi resolution			7.9 x 9.6 x 0.8		
<b>Innovative Solutions and Support</b> 720 Pennsylvania Dr Exton, PA 19341 (610) 646-9800 <a href="http://www.innovative-ss.com">www.innovative-ss.com</a>	Available on IS&S AVIONIC, ADVIZ, Vantage, PC-12 FPDS, cockpit and IP and others.	AMLCD	10.4 inch, 15.4 inch	integrated in glass cockpit	Remote chart server: 8.0	N/A see remarks	Integrated Class 3 chart server system for all models of IS&S Cockpit Display Systems. Class 3 chart information is certified for paperless cockpit with dual servers, own-ship position on all geo-synchronized charts and taxi ways. System provides both full page and patented ZOOM scrolling for detail. Charts include all RNAV, LPV approaches as well. Fast chart search is provided for all charts on the route including approach, departure, SID/STARs. Moving map cursor inputs allow for graphical selection of airports or navaids.
					Display 6.0 mounted in panel		
<b>NavAero</b> 9-15 W. Hubbard St. 5th Floor Chicago, IL 60610 (866) 628-2376 Fax: (312) 423-9966 <a href="http://www.navaero.com">www.navaero.com</a>	t-BagC22 EFB	color TFT LCD resistive touch screen	CPU: 1 USB slot Connectors: 61 pin sealed cradle connector, tPad interface, 3 USB, 1 RS-232 1 LAN	CPU: 1 USB slot Connectors: 61 pin sealed cradle connector, tPad interface, 3 USB, 1 RS-232 1 LAN	1/NA	\$3,495* with 8.4-in. display \$3,995* with 10.4-in. display	*Installation kit extra. Class 2 EFB can be used to store, retrieve, display and use a wide variety of required documents and procedures such as operations specifications, performance data, operations manuals, MELs, control documents and video surveillance. CPU: 1 GHz processor, 40GB hard drive, 512MB memory, Windows XP Professional OS. Removable CPU module computer system contains CPU, power supply and emergency battery backup nickel cadmium power pack. *BCA estimate.
	Class 2	8.4 in. or 10.4 in.			93.8 x 113.8 x 23.8 excluding connectors and mounting hardware	13.8-30 VDC 60 W maximum	
<b>Universal Avionics Systems Corp.</b> 3260 E. Universal Way Tucson, AZ 85756 (520) 295-2300 Fax: (520) 295-2395 <a href="http://www.uasc.com">www.uasc.com</a>	ASU (Application Server Unit)	UCDT III touch screen terminal display	4 ARINC 429, 8 discrete, 2 NTSC video 1 S video 10/100 base T network capability	1 ARINC 429 4 discrete, 10/100 base T network capability	Remote ASU 1/7.5 2 MCU	\$30,000	Provides supplementary display for viewing electronic charts, checklists and external video sources. As an electronic flight bag (EFB), the ASU supports a terminal area chart database via Jeppesen, Inc. Charts, NOTAMs and airport information downloaded from CD-ROM and stored in flash memory within ASU. Flight plan departure and arrival airport information from FMS prompts displays of departure, arrival and approach charts and airport diagrams. Manual searches accomplished via pull-down menu and touch-screen keyboard. Two user-defined zoom levels. System overlays aircraft position onto approach charts and airport diagrams.
	Class 3	5.1 x 6.75 in. 8.4-in. diag			UCD terminal III 1/2.8 6.52 x 8.43 x 1.13	powered by UCD	

## ENHANCED/SYNTHETIC VISION SYSTEMS

Manufacturer	Model	Display	Inputs	Outputs	Units/Weight (lb.)	Remarks
	TSO	Display Size			Size	
<b>Esterline CMC Electronics</b> 600 Dr. Frederik Phillips Blvd. Montreal, Quebec, Canada H4M2S9 (514) 748-3184 Fax: (514) 748-3100 <a href="http://www.cmcelectronics.ca">www.cmcelectronics.ca</a>	<b>CMA-2600</b> SureSight I-series EVS-IR Sensor	HUD/HDD	single, dual-band sensor operating in the short to medium wavelengths, 1-5 microns	2-ANSI/SMPTE 170M ARINC 429 RS 422 descretes	1/LRU 21.0	When used with a HUD as part of a certified EVS, infrared sensor provides situational awareness to pilot for night and low-visibility situations.
	—	dependent on HUD/HDD			NA	
	<b>CMA-2600i</b> SureSight I-Series EVS-IR sensor	HUD/HDD	single, dual-band sensor operating in the short to medium wavelengths, 1-5 microns	2-ANSI/SMPTE 170M ARINC 429 RS 422 descretes	1/LRU 21.0	Infrared sensor provides situation awareness to pilots for night and low-visibility situations.
	—	dependent on HUD/HDD			—	
	<b>CMA-2700</b> SureSight I-Series EVS-IR sensor	HUD/HDD	single, dual-band sensor operating in the short to medium wavelengths, 1-5 microns	2-ANSI/SMPTE 170M ARINC 429 RS 422 descretes 2 ARINC 818	1/LRU 21.0 —	Infrared sensor provides situation awareness to pilots for night and low-visibility situations.
<b>Ebit Systems of America</b> <b>Commercial Aviation Systems - Kollsman</b> 220 Daniel Webster Hwy. Merrimack, NH 03054 (603) 889-2500 <a href="http://www.kollsman.com">www.kollsman.com</a>	<b>EVS II</b>	HUD/HDD	1-5 micron infrared sensor	RS-170/SMPTE 170M; SMPTE 259; RS 232/RS 422; ARINC 429 descrets	3/22.0	EFVS certified for FAR 91.175 (l) and (m) operational credit. EFVS certified for Part 91, 135 and 121 operations on fixed- and rotary-wing applications. *Contact manufacturer for specific application pricing.
		N/A			1/2 ATR	
	<b>GAVIS</b>	any RS-170/ SMPTE, 170M analog video capable display	8-14 micron infrared sensor	RS-170/SMPTE 170M, analog video	1/3.5	EVS certified for situational awareness in all weather conditions. Certified for fixed- and rotary-wing aircraft. *Contact manufacturer for specific application pricing.
	see remarks	N/A			3.0 x 6.0 x 11.0	
	<b>IRIS A100</b>	any RS-10 compatible displays	7-14 micron, uncooled ferroelectric sensor	RS-170, NTSC compatible video or PAL	1/1.7	Uses uncooled BST technology, IRIS provides enhanced visibility of almost any object, day or night, by measuring variations in heat signatures. A real-time, black and white image of people, animals, aircraft and terrain is displayed on any compatible RS-170 cockpit display. *King Air, Bell 206 and Twin Commander STC kits additional. Contact factory for pricing and details.
<b>L-3 Avionics Systems</b> 5353 52nd St. S.W. Grand Rapids, MI 49512 (616) 949-6600 Fax: (616) 285-4224 <a href="http://www.L-3avionics.com">www.L-3avionics.com</a>	see remarks	N/A			5.4 x 5.4 x 3.4	
	<b>EVS-1500</b>	HDD/HUD compatible with many MFDs	long-wave infrared solid-state uncooled sensor	RS-170	camera: -2.8 diameter x 6.8 length power module: 3.75 x 5.0 x 2.25 camera: 2 lb. power module: 2.5 lb.	Pilot selectable dual field of view. Optical zoom. Designed for high-performance fixed- and rotary-wing aircraft.
	—	—			3.77 x 8.69 x 2.51/1.2lb.	
	<b>EVS-600</b>	HDD/MFC	long-wave infrared solid-state uncooled sensor	RS-170	3.77 x 8.69 x 2.51/1.2lb.	Long-wave infrared solid-state uncooled sensor. Limited to FL 250 or below.
	—	—				

## FLIGHT MANAGEMENT SYSTEMS

Manufacturer	Model	CDU Type Display Type	# Available ARINC 429 (In/Out)	Vertical Nav Modes # Available ARINC 429 Procedure Legs	Performance Management	Air Data In (# types)	Specific Interfaces ARINC 429 (Out)	Weight (lb.)	Price / Remarks
	TSOs		TSO'd Nav Sensors		Remote Radio Tuning			CDU Dimensions	
	RNP Certification				ARINC Radar (In)			Power	
<b>Avidyne</b> 55 Old Bedford Rd. Lincoln, MA 01773 (781) 402-7400 (800) AVIDYNE Fax: (781) 402-7599 <a href="http://www.avidyne.com">www.avidyne.com</a>	FMS900W	see remarks  C146  WAAS RNP 0.3, -5, -10 BRNAV	LCD (optional)	multi-waypoint, advisory  —  WAAS, VOR, IRS	No	4 optional; 2 std.	none	NA	\$70,000. Integrated into Avidyne Entegra Release 9 Flight Deck. Price includes FMS900W, dual IDF5000 displays, dual VHF nav/com, dual WAAS GPS sensors and ACD215 control panel.
	C146				Yes			4.6 x 6.25 x 11.0	
	WAAS RNP 0.3, -5, -10 BRNAV				No			20 - 40 VDC	
<b>Esterline CMC Electronics</b> 600 Dr. Frrederik Philips Blvd. Montreal, Quebec Canada H4M 259 (514) 748-3184 Fax: (514) 748-3100 <a href="http://www.cmcelectronics.ca">www.cmcelectronics.ca</a>	CMA-9000	full alpha keyboard  C129, C146  RNP 0.3, -10, BRNAV, PRNAV	AMLCD, color	multi-waypoint, advisory  24/8  GPS, WAAS, VOR, DME, INS, IRS, TACAN	No	ARINC 575	8.0  6.75 x 5.75 x 7.15	—	Price varies by installation. Coupled, performance optimized and advisory VNAV for climb, cruise, descent, approach. Performance table based. FANS-1 capable LPV Approach capable. Optional NVG display.
	C129, C146				Yes			—	
	RNP 0.3, -10, BRNAV, PRNAV				Coupled			—	
<b>FreeFlight Systems</b> 3700 Interstate 35 S. Waco, TX 76706 (254) 662-0000 Fax: (254) 662-9450 <a href="http://www.freeflightsystems.com">www.freeflightsystems.com</a>	2101 Approach Plus	Dzus	4/0	Advisory	No	ARINC 565, ARINC 575; Coarse/ Fine A407 Synchro, ARINC 545, TAS, ARINC 429 ADC, RS-232 ADC	ARINC 429	3.65	\$7245. Price includes receiver, data card, installation kit (with antenna), installation manual and pilot guide, Unit also available with NVG capability.
	—				No			3.0 x 5.75 x 7.68	
	BRNAV				None			10- 40 VDC	
	BRNAV				4			—	
	2101 I/O Approach Plus	Dzus	4/0	Advisory	No	ARINC 565, ARINC 575; Coarse/ Fine A407 Synchro, ARINC 545, TAS, ARINC 429 ADC, RS-232 ADC	ARINC 429	3.65	\$11,500. Price includes receiver, datacard, installation kit (with antenna), installation manual and pilot guide. Sole means oceanic approval; interfaces with EGPWS.
	—				No			3.0 x 5.75 x 7.68	
	BRNAV				None			10- 40 VDC	
	BRNAV				4			—	

## FLIGHT MANAGEMENT SYSTEMS

Manufacturer	Model	CDU Type Display Type	# Available ARINC 429 (In/Out)	Vertical Nav Modes # Available ARINC 429 Procedure Legs	Performance Management	Air Data In (# types)	Specific Interfaces ARINC 429 (Out)	Weight (lb.)	Price / Remarks
	TSOs		TSO'd Nav Sensors		Remote Radio Tuning			CDU Dimensions	
	RNP Certification				ARINC Radar (In)			Power	
<b>Rockwell Collins</b> 400 Collins Rd. N.E. Cedar Rapids, IA 52498 (319) 295-4085 Fax: (319) 295-2297 <a href="http://www.rockwellcollins.com">www.rockwellcollins.com</a>	<b>FMS 3000/5000</b>  C129 GPS, C146 WAAS-B1, -C1	full alpha keyboard	4/3	multi-waypoint	Yes	see remarks	see remarks	8.9	LPV approach capability and RF legs are available on some aircraft types. *FMS I/O provided by four redundant concentrators. Remote computer dimensions 1.7 x 8.84 x 6.06 in.; FMS 5000 requires radio tuning unit; FMS 3000 radio tuning is internal.
					Yes			6.375 x 5.75 x 6.33	
					see remarks			20- 40 VDC	
	<b>FMS 4200/5000</b>  C129 GPS, C146 WAAS-B1, -C1	full alpha keyboard	4/3	multi-waypoint	Yes	see remarks	see remarks	4	LPV approach capability and RF legs are available on some aircraft types. *FMS I/O provided by four redundant concentrators. See FMS3000 remarks for remote computer; FMS4200 has advisory VNAV but not FMS-to-ILS auto transfer; Coupled VNAV available on FMS6000.
					Yes			6.375 x 5.75 x 6.33	
					see remarks			20- 40 VDC	
	<b>FMS 6100</b>  C129 GPS, C146 WAAS-B1, -C1	full alpha keyboard	4/3	multi-waypoint	Yes	see remarks	see remarks	4	FMS I/O provided by four redundant concentrators. See FMS 3000 remarks for remote computer. WAAS/ SBAS capable.
					Yes			6.375 x 5.75 x 6.33	
					see remarks			20- 40 VDC	

## FLIGHT MANAGEMENT SYSTEMS

Manufacturer	Model	CDU Type Display Type	# Available ARINC 429 (In/Out)	Vertical Nav Modes # Available ARINC 429 Procedure Legs	Performance Management Remote Radio Tuning ARINC Radar (In)	Air Data In (# types)	Specific Interfaces ARINC 429 (Out)	Weight (lb.)	Price / Remarks	
	TSOs		TSO'd Nav Sensors					2.9		
	RNP Certification							Power		
<b>Universal Avionics Systems Corp.</b> 3260 E. Universal Way Tucson, AZ 85756 (520) 295-2300 (800) 321-5253 Fax: (520) 295-2395 <a href="http://www.uasc.com">www.uasc.com</a>	<b>UNS-1Lw</b>	Full alpha keyboard	8/5	23	opt.	ARINC 575, ARINC 429 ADC std.; ARINC 565, Course/Fine A407 Sinochro, ARINC 545 TAS opt. See remarks	ARINC 429 GPS, S422A CSDB DME, Arinc 429 DME, Bendix 429 VOR, ARINC 429 VOR, ARINC 429 INS	2.9 4.5 x 5.75 x 6.33; remote computer: 2 MCU, 7.7 lb.	\$54,500. Air data converter unit available; 3-D coupled approach mode; PC program for remote/oceanic ops.; UniLink text compatible; WAAS/SBAS capable.	
	C129 GPS, C146B Gamma	color LCD	GPS, WAAS, Optional: VOR, DME, INS, IRS, Loran, TACAN	multi-waypoint	opt.	ARINC 575, ARINC 429 ADC std.; ARINC 565, Course/Fine A407 Sinochro, ARINC 545 TAS opt. See remarks	ARINC 429 GPS, S422A CSDB DME, Arinc 429 DME, Bendix 429 VOR, ARINC 429 VOR, ARINC 429 INS	20- 40 VDC		
	RNP 0.3, -5, -10				std.					
	<b>UNS-1LEw</b>	full alpha keyboard	8/5	23	opt.	ARINC 575, ARINC 429 ADC std.; ARINC 565, Course/Fine A407 Sinochro, ARINC 545 TAS opt. See remarks	ARINC 429 GPS, S422A CSDB DME, Arinc 429 DME, Bendix 429 VOR, ARINC 429 VOR, ARINC 429 INS	7.86 6.38 x 5.75 x 8.96	\$69,000. 3-D coupled approach mode; PC program for remote/oceanic ops.; UniLink text compatible; WAAS/SBAS capable.	
	C129 GPS, C146B Gamma	color LCD	GPS, WAAS, Optional: VOR, DME, INS, IRS, Loran, TACAN		opt.					
	RNP 0.3, -5, -10				std.			20- 40 VDC		
	<b>UNS-1Espw</b>	full alpha keyboard	8/5	23	opt.	ARINC 575, ARINC 429 ADC std.; ARINC 565, Course/Fine A407 Sinochro, ARINC 545 TAS opt. See remarks	ARINC 429 GPS, S422A CSDB DME, Arinc 429 DME, Bendix 429 VOR, ARINC 429 VOR, ARINC 429 INS	7.25 6.38 x 5.75 x 7.62	\$68,000. 3-D coupled approach mode; PC program for remote/oceanic ops.; UniLink text compatible; WAAS/SBAS capable.	
	C129 GPS, C146B		GPS, WAAS, Optional: VOR, DME, INS, IRS, Loran, TACAN	multi-waypoint	opt.					
	RNP 0.3, 5, 10	color LCD			std.			20- 40 VDC		
	<b>UNS-1Fw</b>	full alpha keyboard	8/5	23	opt.	ARINC 575, ARINC 429 ADC std.; ARINC 565, Course/Fine A407 Sinochro, ARINC 545 TAS opt.	ARINC 429 GPS, S422A CSDB DME, Arinc 429 DME, Bendix 429 VOR, ARINC 429 VOR, ARINC 429 INS	4.1 6.38 x 7.5 x 3.5; remote computer: 2.0 lb.	\$81,500. 3-D coupled approach mode; PC program for remote/oceanic ops.; UniLink text compatible; WAAS/SBAS capable.	
	C129 GPS, C146B Gamma		GPS, WAAS, Optional: VOR, DME, INS, IRS, Loran, TACAN		opt.					
	RNP 0.3, 5, 10	color LCD	multi-waypoint	std.	20- 40 VDC					

## INTEGRATED AVIONICS SYSTEMS

Manufacturer	Model	Inputs	Outputs	CDU Type	Operational Capabilities	Weight (lb.)	Price/Remarks
						Dimensions	
				Dimensions		Power Required	
<b>Avidyne Corp.</b> 55 Old edford Rd. #101 Lincoln, MA 01773 (781) 402-7400 <a href="http://www.avidyne.com">www.avidyne.com</a>	<b>Entegra Release 8</b>	see remarks	see remarks	see remarks	FMS, PFD/MFD, AP/IFCS, EFIS, TAWS, RMU, SVS, CAS/TAWS	18.75	Integrates primary flight information, navigation, terrain, weather, traffic on two or three large-formate displays. Selectable IAS and V-speed ranges to suit aircraft installations. Dual-PFD version features CCS Cross Compare System that monitors cross-side PDF and ADAHRS signals 30 times per second. Works with STEC 55 X autopilot and 3rd party GPS/NAV/Coms for position information.
						two 10.4 in. diagonal, color active matrix displays	
						28 VDC	
	<b>Entegra Release 9</b>	see remarks	see remarks	see remarks	FMS, PFD/MFD, AP/IFCS, EFIS, TAWS, RMU, SVS, CAS/TAWS	18.75	Cirrus Gold starting at \$59,000; Piper Matrix starting at \$72,800. Integrates primart flight information, navigation, weather and traffic on two or three large-format displays. Displays sizes include 8 in., 10 in., 12 in. and 15 in. Modular design includes dual VHF NAV/COM, dual WAAS GPS, dual FMS900w, dual ADAHRS, remote transponder tuning. ACD 215 alphanumeric FMS keypad with display. Optional SVS and EVS.
						two 10.4 in. diagonal, color active matrix displays	
						28 VDC	
<b>Cobham Commercial Systems</b> Integrated Systems One S-TEC Way Municipal Airport Mineral Well, TX 76067 (817) 215-7600 <a href="http://www.s-tec.com">www.s-tec.com</a>	<b>Chelton Flight Systems EFIS</b>	WX500, ADF, TCAS/II, TCAD, ADS-B, TIS-B, radar altimeter, ARINC 429, RS-232, RS-422, 10 discretes	ARINC 429, RS-232, RS-422, 10 discretes, autopilot	color LCD 6.25 x 5.5 in. NVG compatible	FMS, PDF/MFD, AP/IFCS, EFIS, TAWS, SVS, CAS/TAWS	two screen: 2.0 four screen: 50.0 — 10-32 VDC	Two screens: \$95,000; Four screens: \$150,000.
<b>Esterline CMC Electronics</b> 600 Dr. Frederik Phillips Blvd. Montreal, Quebec Canada 4HM 2S9 (514) 748 3148 Fax: 514) 748-3100 <a href="http://www.cmcelectronics.ca">www.cmcelectronics.ca</a>	<b>SmartDeck</b>	ARINC 429, RS-422, RS-232, RS-485, IEEE-139b, discretes, analog, audio	ARINC 429, RS-422, RS-232, RS-485, IEEE-139b, discretes, analog, audio	AMLCD 12 in.	See remarks	See remarks	Price varies by installation. Integrated primary flight information, digital map, EICAS, synthetic vision, terrain, traffic, weather, autopilot, EVS, vertical profile on 2 or 3 large format displays. Dual ADAHRS; dual WAAS GPS with LPV capability; dual 16 watt nav-comm radios with 8.33 kHz. Class B TAWS, JeppView e-charts, Mode S transponder, WSI satellite weather. Single- or dual-pilot installation capability; weight and LRU count varies by installation. Numerous additional features.
—							
—							

## INTEGRATED AVIONICS SYSTEMS

Manufacturer	Model	Inputs	Outputs	CDU Type	Operational Capabilities	Weight (lb.)	Price/Remarks
						Dimensions	
				Power Required			
<b>Garmin International</b> 1200 E. 151st St. Olathe, KS 66062-3426 (913) 397-8200 Fax: (913) 397-8282 <a href="http://www.garmin.com">www.garmin.com</a>	<b>G1000</b>	TCAS I/II, RS-232, RS-422, RS-485; ARINC 429; HSDB, CD/HIS, RMI, air data	RS-232, RS 422, RS-485; ARINC 429; HSDB, CD/HIS, RMI, air data	10- or 12-in. flat-panel LCDs  interchangeable for use as either a PFD or MFD. Optional 15 in. screen available	see remarks	NA	Price varies by installation. An all-glass avionics suite designed for OEM or custom retrofit installation on a wide range of business aircraft. Integrates primary flight information, navigation, communication, weather, terrain and traffic data on two or three large format displays. Tailored to specific OEM requirements. Features include 3-axis, all-digital flight control system; Synthetic Vision Pathway navigation; dual AHRS; dual radio modules with WAAS certified IFR Oceanic-approved GPS, VHF Nav with ILS and VHF Com; dual RVSM-compliant DADC; EICAS; Mode S transponder with TIS; Class B TAWS; Digital weather radar; System also available for King Air 200 and C90.
						NA	
						NA	
	<b>G2000</b>	TCAS I/II, RS-232, RS-422, RS-485; ARINC 429; HSDB, CD/HIS, RMI, air data	TCAS I/II, RS-232, RS-422, RS-485; ARINC 429; HSDB, CD/HIS, RMI, air data	12- or 14-in. backlit LED  see remarks	see remarks	NA	Price varies by installation. Integrates primary flight information, navigation, communication, weather, terrain and traffic data on two large format displays. Tailored to specific OEM requirements. Features include three-axis, all-digital automatic flight control system; Synthetic Vision Pathway navigation; dual solid-state AHRS; dual integrated radio modules with WAAS certified IFR Oceanic-approved GPS, VHF Nav with ILS and VHF Com with 16-W transceivers and 8.33-kHz spacing; dual RVSM-compliant DADC; EICAS; Mode S with TIS; Class B TAWS; digital weather radar; Garmin FliteCharts; and Garmin SafeTaxi.
						NA	
						NA	
	<b>G3000</b>	TCAS I/II, RS-232, RS-422, RS-485; ARINC 429; HSDB, CD/HIS, RMI, air data	TCAS I/II, RS-232, RS-422, RS-485; ARINC 429; HSDB, CD/HIS, RMI, air data	14.1-in. diagonal WXGA  see remarks	see remarks	NA	Price varies by installation. Integrates primary flight information, navigation, communication, weather, terrain and traffic data on 3 large format displays. Tailored to specific OEM requirements. Features include three-axis, all-digital automatic flight control system; Synthetic Vision Pathway navigation; dual solid state AHRS; dual integrated radio modules with WAAS certified IFR oceanic-approved GPS, VHF navigation with ILS and VHF communication with 16-watt transceivers and 8.33-kHz channel spacing; dual RVSM-compliant digital air-data computer; EICAS; Mode S transponder with TIS; Class B TAWS; XM Wx and/or digital weather radar; Garmin FliteCharts; and Garmin SafeTaxi.
						NA	
						NA	

## INTEGRATED AVIONICS SYSTEMS

Manufacturer	Model	Inputs	Outputs	CDU Type Dimensions	Operational Capabilities	Weight (lb.) Dimensions Power Required	Price/Remarks
						Dimensions	
						Power Required	
<b>Garmin International</b> 1200 E. 151st St. Olathe, KS 66062-3426 (913) 397-8200 Fax: (913) 397-8282 <a href="http://www.garmin.com">www.garmin.com</a>	<b>G5000</b>	TCAS I/II, RS 232, RS 422, RS 485; ARINC 429; HSDB, CD/HIS, RMI, air data	RS 232, RS 422, RS 485; ARINC 429; HSDB, CD/HIS, RMI, air data	four backlit LED XGA 1280 X 800 pixels touch-screen displays see remarks	see remarks	NA	Price varies by installation. intended for use aboard a broad range of professionally flown air transport category aircraft, ranging from light jets to large-cabin, transoceanic aircraft. Integrates primary flight information, navigation, communication, weather, terrain and traffic data on 4 large format displays. Features include three-axis, all-digital automatic flight control system; Synthetic Vision Pathway navigation; dual solid state AHRS; dual integrated radio modules with WAAS certified IFR oceanic-approved GPS, VHF navigation with ILS and VHF communication with 16-watt transceivers and 8.33-kHz channel spacing; dual RVSM-compliant digital air-data computer; EICAS; Mode S transponder with TIS; Class B TAWS; XM Wx and/or digital weather radar; Garmin FliteCharts; and Garmin SafeTaxi.
						NA	
						NA	
	<b>G500</b>	TCAS I/II, RS 232, RS 422, RS 485; ARINC 429; HSDB, CD/HIS, RMI, air data	RS 232, RS 422, RS 485; ARINC 429; HSDB, CD/HIS, RMI, air data	dual 6.5-in. VGA LCDs —	see remarks	NA	\$15,995. Includes CDU, digital AHRS, ADC, magnetometer, temperature probe. Also certified to C2d, C10b and C34c. Replaces standard six-pack instruments. Features 6.5-in. PFD and MFD plus AHRS. SVT is standard with G600 and optional for G500. Optional TAWS-B for G600 only. GWX68 radar sold separately. Includes CDU (dual 6.5-in. VGA LCD), digital AHRS, ADC, magnetometer, temperature probe. Optional enhanced autopilot interface capabilities using the optional GAD 43.
						NA	
						NA	
	<b>G600</b>	TCAS I/II, RS 232, RS 422, RS 485; ARINC 429; HSDB, CD/HIS, RMI, air data	RS 232, RS 422, RS 485; ARINC 429; HSDB, CD/HIS, RMI, air data	dual 6.5-in. VGA LCDs —	see remarks	NA	\$29,995. Includes CDU, digital AHRS, ADC, magnetometer, temperature probe. Also certified to C2d, C10b and C34c. Replaces standard six-pack instruments. Features 6.5-in. PFD and MFD plus AHRS. SVT is standard with G600 and optional for G500. Optional TAWS-B for G600 only. GWX68 radar sold separately. Includes CDU (dual 6.5-in. VGA LCD), digital AHRS, ADC, magnetometer, temperature probe. Optional enhanced autopilot interface capabilities using the optional GAD 43.
						NA	
						NA	

## INTEGRATED AVIONICS SYSTEMS

Manufacturer	Model	Inputs	Outputs	CDU Type	Operational Capabilities	Weight (lb.)	Price/Remarks	
						Dimensions		
						Power Required		
<b>Garmin International</b> 1200 E. 151st St. Olathe, KS 66062-3426 (913) 397-8200 Fax: (913) 397-8282 <a href="http://www.garmin.com">www.garmin.com</a>	<b>GTN 750</b>	TCAS I/II, RS 232, RS 422, RS 485; ARINC 429; HSDB, CD/HIS, RMI, air data	RS 232, RS 422, RS 485; ARINC 429; HSDB, CD/HIS, RMI, air data	VGA LCD	GPS/VOR, LOC/GS	9.3	\$16,995	
		TCAS I/II, RS 232, RS 422, RS 485; ARINC 429; HSDB, CD/HIS, RMI, air data	RS 232, RS 422, RS 485; ARINC 429; HSDB, CD/HIS, RMI, air data	Color TFT LCD Touch-screen 600 x 267		NA		
						NA		
	<b>GTN 725</b>	TCAS I/II, RS 232, RS 422, RS 485; ARINC 429; HSDB, CD/HIS, RMI, air data	RS 232, RS 422, RS 485; ARINC 429; HSDB, CD/HIS, RMI, air data	GPS/VOR, LOC/GS	9.3	\$15,000		
					NA			
	<b>GTN 650</b>	TCAS I/II, RS 232, RS 422, RS 485; ARINC 429; HSDB, CD/HIS, RMI, air data	RS 232, RS 422, RS 485; ARINC 429; HSDB, CD/HIS, RMI, air data	GPS/VOR, LOC/GS	7.0	\$11,495		
					NA			
					NA			
	<b>GTN 635</b>	TCAS I/II, RS 232, RS 422, RS 485; ARINC 429; HSDB, CD/HIS, RMI, air data	RS 232, RS 422, RS 485; ARINC 429; HSDB, CD/HIS, RMI, air data	GPS/VOR, LOC/GS	7.0	\$10,495		
					NA			
					NA			
	<b>GTN 625</b>	TCAS I/II, RS 232, RS 422, RS 485; ARINC 429; HSDB, CD/HIS, RMI, air data	RS 232, RS 422, RS 485; ARINC 429; HSDB, CD/HIS, RMI, air data	GPS/VOR, LOC/GS	7.0	\$9,595		
					NA			
					NA			
<b>Innovative Solutions &amp; Support (IS&amp;S)</b> 70 Pennsylvania Dr. Exton, PA 19341 (610) 646-9800 Fax: (610) 646-0149 <a href="http://www.innovative-ss.com">www.innovative-ss.com</a>	<b>Cessna Citation AdViz Flat Panel Display</b>	ARINC 429, A453/708, Ethernet, Descretes, Analog, Syncro, RS-422, CSDB, USB	ARINC 429, A453/708, Ethernet, Descretes, Analog, Syncro, RS-422, CSDB, USB	AMLCD	see remarks	Price varies by installation. Designed to replace existing instruments, including the EADI and EHSI displays, altimeter, airspeed and vertical speed indicators. Retrofitting existing aircraft requires minimal changes to existing aircraft wiring while reducing power consumption and weight. Options include satellite weather, e-charts, video and remote radio control.		
				10.4 in.		7.0 10.0 x 8.35 x 2.51 configuration dependent		
	<b>Eclipse Avionics</b>	ARINC 429, ARNC 453, RS 232, RS 42, Bytefile, Ethernet, discretes	ARINC 429, ARNC 453, RS 232, RS 42, Bytefile, USB, Ethernet, discretes	AMLCD PFD: 10.4 in. (2) MFD: 15.4 in. PFD: 50 W MFD: 75 W	see remarks	PFD: 8.5 MFD: 12.5 PFD: 10.4 in. (2) MFD: 15.4 in. PFD: 50 W MFD: 75 W	Price varies by installation. FMS options include either integrated WAAS-based FMS, exterior WAAS-based FMS or non-WAAS-based FMS; system provides PFD/ND with MFD functions and engine instruments; system interfaces with new or existing AP/FD/IFCS; TAWS display provided and connects directly with TAWS; remote tuned radios optional; e-charts, moving maps, radar display, satellite weather, TCAS-I, fuel management and aircraft systems pages.	
	<b>Pilatus PC-12 FPDS System</b>	contact OEM for details	contact OEM for details	AMLCD 10.4; 15.0	see remarks	15 in. IPFD, 14 lb., 70 W; 10 in. IPFD, 8 lb., 35 W; DCP, 3.0 lb, 8 W — —	Price varies by installation. FMS options include either WAAS-based FMS, exterior WAAS-based FMS or non-WAAS-based FMS; systems provides PFD/ND with MFD functions; coupled WAAS LPV approach; system interfaces with new or existing AP/FPD/IFCS; RVSM certified, options include RS 170 or DVI video input on 5.15-in. IPFD; TAWS terrain display provided and connects directly with TAWS; e-charts certified.	

## INTEGRATED AVIONICS SYSTEMS

Manufacturer	Model	Inputs	Outputs	CDU Type	Operational Capabilities	Weight (lb.)	Price/Remarks
						Dimensions	
				Dimensions		Power Required	
<b>Innovative Solutions &amp; Support (IS&amp;S)</b> 70 Pennsylvania Dr. Exton, PA 19341 (610) 646-9800 Fax: (610) 646-0149 <a href="http://www.innovative-ss.com">www.innovative-ss.com</a>	Vantage Cockpit/IP Flat Panel Display System	contact OEM for details	contact OEM for details	AMLCD	see remarks	IFPD: 6.0 lb., 30 watts RNCU: 9.75 lbs., 25 watts; ECSU: 25 watts	Price varies by installation. FMS options include either WAAS-based FMS, exterror WAAS-based FMS or non-WAAS-based FMS; systems provides PFD/ND with MFD functions and engine instruments; system interfaces with new or existing AP/FD/IFCS; EVS input can be input fromEVS camera or other video camera via RS-170; TAWS terrain display provided and connect directly with TAWS; remote tuned radios optional. e-charts, moving maps (worldwide terrain 3-arc/second, radar display, satellite weather, TCAS-I/II, fuel management exceedance redording and video.
<b>Rockwell Collins</b> 400 Collins Rd. NE Cedar Rapids, Iowa 52498 <a href="http://www.rockwellcollins.com">www.rockwellcollins.com</a>	Pro Line Fusion	See Remarks	See Remarks	15.1-in. color LCD SXGA: 14.1-in. color LCD WXGA		FMS, PFD/Adapts to 3, 4 or 5 LCD graphic display configuration integrating PFD/MFD flight information	various, depending on installation
				Color LCD	FMS, PDF/MFD, EFIS, TAWS, RMU, EVS, SVS pending	Various, depending on installation	
<b>Rogerson Kratos</b> 403 S. Raymond Pasadena, CA 91109 (626) 449-3090 Fax: (626) 449-4805 <a href="http://www.rogersonkratos.com">www.rogersonkratos.com</a>	Series 700 Integrated Avionics System for Bell 412 and Bell 429; TC on Bell 429 and STC on Bell 412 using 6 x 8 ALMD displays	ARINC 429, Synchro, Discretes, RGB, NTSC, PAL video capability	ARINC 429, variable DC, Discretes	Course Heading Select Panel (CHSP)	PFD, MFD, EICAS Mission functions: FLIR, RS-170 video, fuel and hydraulics	Each display unit: 13.5	Prices based on quantity; dependent on engine type.
	Series 600 Integrated Avionics System using 6 x 8 AMLCD displays	ARINC 429, Synchro, Discretes, RGB, NTSC, PAL video capability	ARINC 429, Synchro, Discretes, RGB, NTSC, PAL video capability	Course Heading Select Panel (CHSP)	PFD, MFD Mission functions: FLIR, RS-170 video, fuel and hydraulics	Each display unit: 13.5	